A F Tyler

Digitized by the Internet Archive
in 2015

https://archive.org/details/nebraskastatemed3191nebr

# The Nebraska State Medical Journal

Volume III
January 1918--December 1918

JOSEPH M. AIKIN, Managing Editor

Committee on Journal and Publication
F. A. LONG, M. D., Chairman B. F. BAILEY, M. D.
W. O. BRIDGES, M. D. J. M. AIKIN, M. D., Ex-Officio

HUSE PUBLISHING COMPANY, Norfolk, Nebr.

# INDEX TO VOLUME III.

Abstracts 70, 103, 216, 217, 261, 262, 324, 325, 326, 357, 387, 388

Acidosis in Children, Floyd Clarke, M. D. 37

Acidosis, Charles J. Breuer, M. A., M. D. 19

Actual Benefit to Surgery Derived from the Present War, R. R. Tollister, M. D. 211

Acute Gonorrheal Urethritis, H. R., Brown, M. D. 10

Address by Major Jump before the Nebraska State Medical Association, June 8 164

Anesthesia and Analgesia in Labor, Arthur L. Smith 23

Base Hospital List Complete—Enlisted Personnel of Nebraska Unit Finished 95

Birth Statistics in the Registration Area of the United States, 1916 356

Bone Surgery, With Reports of Cases, Chas. H. Breuer, M. D. 242

Book Reviews 64, 102, 136, 168, 223, 326

Books Received During September 326

By-Laws 310

Case Reports—

- Report of Intracranial Growths, H. B. Lemere, M. D. 59
- Dyspituitarism, Olga Stastny, M. D. 60
- Report of Acute Cerebro-Spinal Syphilis, Geo. W. Covey, M. D. 61
- Tuberculous Appendix, Max Emmert, M. D. 62
- Tuberculous Meningitis, Frank M. Conlin, M.D. 62
- Interlobar Empyema with Spontaneous Rupture, Leroy Crummer, M. D. 63
- Colon Bacillus Abscess of the Liver, E. C. Henry, M. D. 64
- Foreign Body in the Appendix, F. A. Long, M. D. 99
- Chancre of the Lip, M. J. Breuer, M. D. 99
- Acute Lymphatic Leukemia, Frank M. Conlin, M. D. 100
- Report of Case of Persistent Hiccough, L. M. Stearns, M. D. 136
- Report of Lipoma of the Caecum Causing an Intussusception, J. E. Summers, M. D. 180
- Report of Case of Wandering Spleen—Excision, J. E. Summers, M. D. 181
- Report of Case of Ruptured Ovarian Cyst, J. E. Summers, M. D. 181
- Coexisting Intra and Extra-Uterine Pregnancy, J. W. Duncan M. D. 182
- Carcinoma Head of Pancreas, A. Sacha, M. D. 283
- Granuloma Pyogenicum, Report of Two Cases, M. G. Wohl, M. D. 304

Changes Necessary to the Future Practice of Medicine, C. A. Roeder, M. D. 160

Child Conservation a War Measure, J. D. Reid, M. D. 305

Complement Fixation in Tuberculosis, H. J. Lehnhoff, M. D. 265

Complemental Jejunostomy, A. I. MacKinnon, D. D. 335

Constitution 308

Conserve Ammonia—Use of Natural Ice 32

Convulsions in Children, W. O. Colburn, M. D. 73

Cultures of Tubercle Bacilli from the Blood and other Body Fluids in Clinical Diagnosis 101

Double Ureterostomy for Inoperable Obstruction of the Ureters, C. A. Roeder, M. D. 7

Early Diagnosis of Cancer of the Uterus, Palmer Findley, M. D. 273

Early Recognition of Cancer of the Breast, J. A. Welch, M. D. 81

Editorials. .33, 54, 91, 122, 154, 186, 218, 256, 286, 320, 354 383, 384, 385, 386.

Empyema in Children, H. B. Hamilton, M. D. 41

Empyema in Nasal Accessory Sinuses, H. B. Lemere, M. D. 53

Extract from Letter from Maj. E. L. Bridges, Allerey, France 355

First Aid to the Injured, James C. Tucker, M. D. 5

Flat Feet, J. E. M. Thumson, A. B., M. D. 87

Fracture of the Os Calcis, J. W. Duncan, M. D. 89

Hemolytic Jaundice with Report of Case, W. O. Bridges, M. D. 361

Indications for and Results of the Use of the Metal Bone Plates, Bone Graft, and Conservative Methods in the Treatment of Fractures, A. F. Jonas, M. D. 329

Infantile Scurvy, W. O. Colburn, M. D. 340

Laboratory Diagnosis of Early Tuberculosis, Miles J. Breuer, M. A., M. D. 83

Letter from Arthur Dean Bevan 223

Lymphatic Drain of the Nose and Throat with its Relation to Focal Infections, W. P. Wherry, M. D. 237

Mechanical Illeus Due to Twisted Pedicle of Cystic Ovary, P. H. Salter, M. D. 210

Medical Aid and Selective Service Draft 214

Medical Inspection in the Public Schools of Omaha, E. T. Mannning, M. D. 105

Medical Organization for Government Service 182

Medical vs. Surgical Treatment of Gastric and Duodenal Ulcer, J. M. Mayhew, M. D. 369

Meningitis in the Newborn and in Early Infancy, by Moses Barron, M. D., Minneapolis, Minn. 327

Military Anti-Tuberculosis Plan Perfected 129

Military Surgery, Effects of Modern Projectiles, Treatment of Infected Wounds, Tetanus, Gas Poisoning, Trench Foot, the Use of the X-ray in Locating Foreign Bodies—John E. Summers, M. D. 1

Nebraska State Medical Association Program 96

Nebraska Medical Men and the Medical Reserve Corps 123

Nebraska State Medical Association 135

Necrology 70, 221, 291, 359

Nephritis, Adolph Sachs, M. D. 109

Nephritis, Adolph Sachs, M. D. 169

Nitrous Oxid-Oxygen Analgesia in Obstetrics, Arthur L. Smith, A. B., M. D. 378

Nuclear Paralysis, Frederick F. Teal, M. D. 276

Observations upon Caesarean Section, C. C. Allison, M. D. 58

Officers and Delegates of County Societies so far Returned for 1918 .......... 33
Officers of the Nebraska State Medical Association for 1919 .......... 319
Osteopathy and Chiropractic .......... 251
Pelvic Conditions Producing Bladder Symptoms, Max Emmert, M. D. .......... 247
Physical Examination of Applicants for the Aviation Service, U. S. A., Frank M. Conlin, M. D. .. 120
Precancerous Conditions of the Breast, M. G. Wohl, M. D. .......... 153
President's Address, C. L. Mullins, M. D. .......... 137
Present Status of Streptococcus Differentiation, W. C. Becker, M. D. .......... 47
Presentation and their Diagnosis, J. M. Campbell, M. D. .......... 53
Progress of Birth and Death Registration in U. S. .. 179
Procaine and Novocaine Identical .......... 216
Prophylaxis, with Special Reference to Protein Metabolism, J. L. Sutherland, M. D. .......... 124
Public Health Service for Rural Districts, F. W. Buckley, M. D. .......... 203
Pyelography, Indications and Technic, C. Emerson, M. D. .......... 379
Rapid Methods in Tissue Diagnosis, Miles J. Breuer, M. A., M. D. .......... 94
Recent Development in Intestinal Bacteriology ... 292
Rectal Examinations in Obstetrics, Palmer Findley, M. D. .......... 175
Report of Officers and Committee—
  State Secretary's Report .......... 165
  Report of Committee on Scientific Work ..... 166
  Report of Librarian .......... 166
Report of Medico-Legal Defense Committee ...... 178
Report of Department of Health, W. F. Wild, M. D., Commissioner of Health .......... 173
Results of Tonsillectomy, Louis B. Bushman, M. D. 338
Roentgen Diagnosis of Carcinoma of Stomach, Colon and Rectum, A. F. Tyler, M. D. .......... 280
Serial Extraction in Pyorrhea, W. Clyde Davis, M. D., D. D. S. .......... 382
Sidelights on Carcinoma, O. C. Morrison, M. S. M. D. .......... 342
Sinustitis and a Conservative Treatment for Selected Cases, S. G. Zemer, S. B., M. D. .......... 301
Smallpox, R. W. Fouts, M. D. .......... 135
Some Observations on Surgical Successes and Failures, A. D. Dunn, M. D. .......... 235
Standards for Diagnosis, Classification and Treatment of Tuberculosis in Children and Adults. 102
The Tonsil in General Diseases and Its Treatment by the General Practitioner, Robt. T. Jones, M. D. .......... 12
The Internal Secretions, A. E., Guenther, Ph. D. .. 15
The Diagnostic Value of Cerebrospinal Fluid Examination, M. G. Wohl, M. D. .......... 43
The Radical Operation for the Treatment of Acute or Subacute Peritonsillar Abscess, Henry B. Lemere, M. D. .......... 372
The Red Cross and the Antivivisectionists .......... 76
The Diagnosis and Management of Cardio-Vascular Renal Disease, J. W. Shuman, M. D. ..... 114
The Chicago Session .......... 135
The Banquet .......... 142
The Fiftieth Annual Meeting of the Nebraska State Medical Association .......... 183
The Correction of Nasal Deformities by the Transplantation of Bone, J. M. Banister, A. B., M. D. 201
The Stay At Homes, I. N. Pickett, M. D. .......... 249
The Differential Diagnosis Between Benign and Malignant Tumors of the Female Breast, John E. Summers, M. D. .......... 297
The Law As It Is Practised by Lawyers. How Much of It Do We Want?—J. L. Sutherland, M. D. .......... 349
Thrombosis and Embolism of the Mesenteric Vessels, Byron B. Davis, M. D. .......... 345
Treatment of Certain Fractures Occurring in or Near Joints, C. H. Newell, M. D. .......... 116
Treatment of Eclampsia, J. C. Edgar, M. D. ....... 158
Treatment of Diabetes (Especially with Reference to the Dietetic Control of the Diabetic), Frederick A. McGrew, M. D. .......... 206
Treatment of Syphilis, C. C. Tomlinson, M. D. ..... 277
Tuberculosis in Children, Floyd Clarke, M. D. ..... 158
Tuberculosis, A. K., Detwiler, M. D. .......... 268
Venereal Disease Control .......... 357

# THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, OMAHA, MAY 7, 8, 9, 1918

Vol. III. Norfolk, Nebraska, January, 1918. No. 1

## CONTENTS.

Page

Military Surgery, Effects of Modern Projectiles, Treatment of Infected Wounds, Tetanus, Gas Poisoning, Trench Foot, the Use of the X-ray in Locating Foreign Bodies, John E. Summers, M. D., Omaha ..... 1
First Aid to the Injured, James C. Tucker, M. D., Long Pine ..... 5
Double Ureterostomy for Inoperable Obstruction of the Ureters, C. A. Roeder, M. D., Omaha ..... 7
Acute Gonorrheal Urethritis, H. R. Brown, M. D., Beatrice ..... 10
The Tonsil in General Diseases and Its Treatment by the General Practitioner, Robt. T. Jones, M. D., Edgar ..... 12
The Internal Secretions, A. E. Guenther, Ph. D., Omaha ..... 15
Acidosis, Miles J. Breuer, M. A., M. D., Lincoln ..... 19
Anesthesia and Analgesia in Labor, Arthur L. Smith, M. D., Lincoln ..... 23
Conserve Ammonia—Use of Natural Ice ..... 32
Editorial ..... 33
Officers and Delegates of County Societies so far Returned for 1918 ..... 33
Nebraska Notes ..... 34
Notes ..... 35
County Society Notes ..... 35

## Military Surgery, Effects of Modern Projectiles, Treatment of Infected Wounds, Tetanus, Gas Poisoning, Trench Foot, The Use of the X-ray in Locating Foreign Bodies.*

John E. Summers, M. D., Omaha.

The character of a wound depends upon the projectile causing it—its shape and size and the way in which it strikes; also the amount of resistance it meets, whether it comes in contact with bone, or merely traverses soft tissues; again, it depends on the velocity of the projectile and the distance from which it was discharged. Projectiles at proximal ranges, or distances up to 500 yards, generally inflict the most severe injuries; these are called explosive bullets because the wound, which may be only a small puncture at the point of entrance, is large and gaping at the point of exit, due to the rapid propulsive and divulsive force of the projectile. Rifle bullets cause greater damage than shrapnel except when shrapnel bursts above the trenches, or near to massed troops; it becomes less dangerous the greater the distance at which it bursts. Shrapnel usually causes non-perforating wounds, i. e. wounds of a single aperture, with the projectile remaining in the wound, and usually also a mass of contaminated matter; these wounds are generally infected. Perforating wounds show both wounds of entrance and of exit. Another class of wounds is gutter wounds; in these, fragments of shells, or shrapnel or rifle bullets strike the tissues superficially, eroding the tissues or ploughing deep furrows.

The larger wounds caused by deformed or ricochet bullets are very likely to be infected because the bullet is generally contaminated from skimming along the ground or striking against some object which changes its course and causes it to ricochet, also because there is greater danger of infection from contact with clothing before a dressing can be applied. All these wounds should be carefully watched.

---

*Read before the Nebraska State Medical Association, Lincoln, May, 1917.

In suppurating wounds which usually result from shrapnel bullets and shell fragments, a cellulitis is often caused by the presence of B. perfringes; B. tetanus may also be present. Of the former bacillus the worst type is found in wounds where the circulation has been disturbed and the parts are consequently devitalized; B. perfringes are found here probably because anerobes develop best in dead or dying tissues. A larger proportion of injuries to blood vessels is seen in modern warfare; with the older types of projectiles traveling at a low velocity the blood-vessels were oftener pushed aside than by the present high-velocity bullets. These injuries are very important, not only because of the immediate danger to the soldier's life, but because of complications which may result—gangrene, secondary hemorrhage, and aneurism. A group of cases infected by anerobic organisms, and which are of extreme importance on account of the severity of the infection, are those in which are found B. tetani. The number of cases which develop tetanus is small because of the wide use of prophylactic doses of anti-tetanic serum. Sir David Bruce's conclusions as to tetanus are: (1) In 231 cases the mortality was 57.7%; (2) Cases with a short incubation are more fatal than those with a longer incubation; (3) The majority of cases occur on the tenth day after the infliction of the wound. Tetanus may occur in all degrees of severity and early diagnosis is important in order that severe measures of treatment may be carried out. Tetanus may develop at a period remote from the time of being wounded. Its treatment should be: First, prophylactic, and at the earliest possible moment. Second, when the disease has developed, local, general, specific and combined treatment may be used. First, the wound should be immediately cleansed, all devitalized tissue removed and the wound swabbed out with carbolic acid; wet dressings, preferrably hypochlorous acid, should be used. Second, chloroform or ether should be inhaled, to control spasms. Third, the specific treatment, when drastic measures are necessary, give repeated doses of anti-tetanic serum. Stewart and Laing have recommended the use of carbolic acid injections—2 c. c. of a 5% solution every two hours. The use of a solution of magnesium sulphate has been advocated, to be administered by subcutaneous injection, by intramuscular injection, by intravenous injection, or by intraspinal injection. The fourth or combined treatment is used in most aggravated cases as a last resort; it consists in combining the other methods.

### Antiseptic Irrigation.

The purpose of drainage is to prevent the accumulation of pus and necrotic tissues in wounds. Wounds should not be packed tightly with gauze, for this would obstruct the discharges from the wound, rather than aid in their escape. In no form of surgery should gauze packs be used as drainage material, except where the principal indication is pressure for the control of hemorrhage and the limitation of the spread of septic infection. Perforated rubber tubing is good, but should be used with care in the region of blood-vessels, for there is danger of erosion of the vessels and consequent hemorrhage. I have in my own experience, in a case of suppurative appendicitis, seen fatal hemorrhage develop because of erosion of the iliac vessels from drainage-tube pressure. In small wounds rubber dam tissue may be used, or small strips of gauze packed loosely into the wound, so as not to obstruct it. In these wounds, in order to establish constant bathing of the deeper parts of the wounds, strips of gauze fastened to a small rubber tubing may be inserted into the deeper recesses of the wound, and the rubber tube connected with an irrigating appartus containing the solution to be used. The solution drips slowly into the wound, the gauze drains become saturated, and the overflow is removed by capillary attraction of the gauze. In perforating wounds, in order to establish free drainage, it may be necessary to enlarge both the wounds of entrance and exit. The antiseptic solutions most generally used at the present time are Dakin's Fluid, and the Isotonic or Hypertonic Saline Solutions of Wright.

Dakin's fluid is a modification of Labarraque's solution, which many of us have used extensively in infected wounds. Dakin's fluid is prepared in two forms—eusol (the liquid form) and eupad (powder).

Eupad is chloride of lime mixed with boric acid powder. Eusol is prepared from eupad, by adding water. It stimulates granulations, and assists greatly in the separation of sloughing tissues. Dakin's fluid may be also used as a gas, in which form it is still more powerful as a germicide, because it is more penetrating and more easily absorbed by the tissues than is the solution.

Smith and Drennan conclude, regarding the antiseptic qualities of Dakin's fluid, or hypochlorous acid, that,

1. Comparative tests confirm the conclusion already arrived at by various investigators, that this is the most powerful antiseptic known.
2. Practical methods of using this antiseptic have been devised.
3. It can be used either as a gas or as a solution, the advantage of using the gas being that it will penetrate and will act at a distance.
4. Both the gas and the solution, while extremely potent against organisms and their spores, cause little or no harm to the tissues.
5. The effect of this antiseptic is purely local. The decomposition products are devoid of toxicity, and there is therefore no danger to be apprehended from absorption.
6. A flow of lymph is induced from the wound as part of the reaction of the tissues.
7. Fetor is rapidly eliminated.
8. If pain and irritation occur they can be easily controlled by reducing the concentration of the antiseptic.
9. The practical advantages of this antiseptic for field use are:

(a) It can be used as a dry powder and therefore obviates the difficulty of procuring water.

(b) It can be introduced into the gauze pad of the first field dressing.

(c) Where water is available, the same powder can be made up as a lotion for general use.

Carrel has perfected a technique in the use of Dakin's fluid.

The Hypertonic Saline Solution of Wright promotes a free flow of lymph, thus bringing to the wound a supply of fresh lymph. There are two strengths of this saline solution, which should be used, according to the condition of the wound—the hypertonic—a one-half to one per cent solution of sodium chloride; it prevents the growth of bacteria, promotes the flow of lymph, and prevents its coagulation. The isotonic or normal solution is .85% sodium chloride. This solution causes a protective layer of leucocytes to form over the wound, thus preventing farther bacterial invasion.

In the war with Germany, one of the new methods of inflicting injury upon the enemy is that of gas poisoning. There are two forms of gas used—shell gas and drift gas.

Shell gas is contained in shells which are projected and burst over the trenches, setting free an irritant and asphyxiating gas; it irritates the eyes and causes symptoms such as nausea and vomiting. This gas is similar in its effects, to chlorine or bromine.

Drift gas is used much more than shell gas. It is discharged under pressure, from large cylinders in the trenches, through tubes leading up over the edge of the trench. The gas, which is chiefly chlorine, drifts along over the ground to the opposite trenches and flows into them. Its first effect on the soldiers is a marked irritation of the eyes and throat, then inability to breathe, and a choking sensation; also severe pain in the chest. Soon the victim begins to vomit a greenish-yellow fluid, and he then passes into the toxic stage, and falls to the ground. There is a feeling of lassitude, dyspnoea and a sensation of constriction in the chest, also a severe headache; the skin is of a greenish-yellow color.

Post mortems have shown that soldiers who were poisoned by gas died of acute congestion and edema of the lungs, therefore the object of the treatment should be, first, to expel the excessive secretion from the lungs by emetics and stimulating expectorants; second, to diminish the secretion; third, to support the failing heart and reoxyginate the blood.

Gas masks have been invented, which have greatly decreased the danger of gas poisoning. The soldiers carry these with them always, in the trenches, and put them on when there is a warning. The mask is saturated with hyposulphite of soda and glycerine, which counteracts the effect of the gas.

Patients should be guarded against any factor which lowers the resistance and exhausts them either mentally or physically. In the present trench warfare soldiers are in excellent physical condition, are well fed, and are not exhausted by long marches. When wounded soldiers are brought into hospitals in an apparent collapse, a vast difference in their condition is noticeable twenty-four hours later, after they have had warm baths and have become rested physically. Mental stimulation is just as necessary, and treatment by suggestion should be carried out.

A painful disease known as trench foot, has developed in the present trench warfare. It is due to long immersion of the feet in cold water which often stands in the trenches during the winter. This condition is really due to the inactivity of the muscles and the slowing of the circulation. There is pain or hyperesthesia over the dorsal and plantar aspects of the foot, which comes on shortly after the numbness wears off. The foot is slightly cyanosed, and may be slightly swollen. Often the foot is normal in appearance.

The principal treatment should be rest in bed and the use of some evaporating fluid, such as alcohol, or lead and opium wash. The best treatment is prophylactic—boots should not fit tightly; two pairs of socks should be worn if possible; the general circulation should be kept up; a pair of dry socks should be carried in the pocket; boots should be well greased; they should be taken off at least once in twenty-four hours, and the feet rubbed dry and dry socks put on. Officers should keep the trenches drained as well as possible.

The X-ray is proving itself invaluable in the exact localization of projectiles, after which the extraction is a comparatively minor operation. Foreign bodies are localized by the following steps:

The presence and nature of the projectile is determined by radiography or radioscopy; next the accurate geometrical localization with reference to known points on the surface of the skin, is determined, also with reference to adjacent organs and tissues. Finally, the extraction may be greatly facilitated by the use, during operation, of one of the surgical guides that have been devised. Flint describes these guides in an interesting article in The Military Surgeon, March, 1917. First, in localizing a projectile, the ring compass is used. By means of the fluoroscope the projectile is observed in the middle of the two rings of the compass on opposite sides of the body, and marks are made on the skin in each ring. Several observations are thus marked. The profondometer, a hinged band of malleable metal made to take the exact contour of the body at the level of the projectile, is then used. The profondometer is then transferred to paper, the diagonals drawn and the projectile located. Next, its relationship to different organs is noted by tracing them on the paper, and it is decided where to make the incision. In certain parts of the body, because of the interposition of bony structures, it is necessary to make localizations in several different planes. A definite guide described by Dr. Flint, is one devised by Sutton, consisting of a cannula and trochar; the cannula is introduced under the skin previously anesthetized by novocain; the sharp trochar is removed from the cannula and replaced by a blunt obturator; the fluoroscope is employed, and under the vision of the operator the cannula with its obturator, is passed down through the tissues until it touches the projectile. Flint substitutes a harpoon in place of the obturator, and the patient is then ready for operation, which is then not difficult.

In conclusion, let me say that this paper is abstracted from what I consider the best written information at hand to date. I particularly refer in this connection, to the writings of Dunlap Pearce Penhallow (Military Surgery) and to Dr. Joseph M. Flint, (Military Surgeon, March, 1917).

### Discussion.

**Dr. D. B. Steenburg, Aurora.**—During the summer of 1915 while serving with the second Harvard unit in France in a British base hospital located about fifteen miles behind the first line trenches I had opportunity to observe first hand many of the things that have been discussed this afternoon.

In the present war, owing to the fact that both armies are protected by trenches and there is little hand to hand fighting, the wounds are almost entirely the result of projectiles, which for our purpose can be divided into three classes, namely: 1. Projectiles from machine guns, rifles and revolvers. 2. Projectiles from artillery. 3. Grenades, bombs and mines.

In the first class we have to deal with a cylindrical projectile of hardened lead in a soft steel envelope covered with German silver weighing about 10 grams. The effect of these bullets varies directly with the range and since this is a "very short distance" war we have a very great striking force which shows itself as an explosive force. The wound of entrance being small the wound in the subjacent soft parts being of large calibre due to the great divulsive force. At this short range detached fragments of bone act as additional projectiles. Richochets and deformed bullets have a greater tearing force than a bullet traveling straight and the wound shows a much larger wound of entrance.

In the second class we have two principal classes —shrapnel and high explosives. The shrapnel shell case, the fuse and the shrapnel bullets must all be considered as projectiles and the amount of damage caused varies on the bursting height of the shell. Generally speaking the wounds are more superficial than rifle ball wounds, more irregular and much more apt to be infected.

The wounds from high explosives like shrapnel vary with the bursting height of the shell but due to the greater force the larger size of the fragments the wounds are among the most terrible the military surgeon has to deal with. The concussion itself is no small thing to reckon with. While visiting one of the hospitals at Oxford with Sir William Osler we came upon a group of men all of whom had been buried by high explosive shell action, they had sustained no wounds but mentally their condition was certainly deplorable.

In the third class we find wounds not unlike shrapnel wounds save that they are generally less severe and here again the bursting point of the grenade or bomb determines much.

Wounds may be classified as: Perforating, penetrating, gutter, lacerated and contused. The perforating being mostly caused by rifle and shrapnel bullets and occasionally by shell fragments show a wound of entrance and one of exit. Penetrating wounds in general are caused by slower moving projectiles such as shrapnel and grenade fragments and vary from a puncture of the skin to great gaping wounds all of which have more or less foreign material such as bits of clothing at the base. Lacerated wounds are caused by shell and grenade fragments and show a wound the edges of which are torn and lacerated there being often considerable loss of tissue. Gutter wounds as the name implies are caused by a projectile ploughing along the surface.

Wounds may further be classified as aseptic and septic. The former is rather rare. I remember one "kilty" who was shot through the calf of the bare leg the wound healed per prima much to the surprise of all. In considering septic wounds we usually have to deal with the deeper, more ragged wounds which offer better chances for the development of bacteria. Beside the organisms causing suppuration we have in the great majority of cases to deal with the B. perfringens and the B. tetani.

Treatment of wounds at the front consist mostly in applying some form of protective dressing, controlling hemorrhage and applying apparatus to fractures and giving a prophylactic dose of antitetanic serum. At a base hospital such as the one operated by the second Harvard unit the clean cases received much the same treatment as in civil practise. The septic cases presented the really big problem, the general principles of which were to remove all foreign bodies to institute efficient drainage and combat the already virulent infection with either hypochlorous acid solution (Dakin's) or the method of Sir Almroth Wright which has as its aim the increasing of lymph flow by means of hypertonic saline solutions. Secondary hemorrhage is a thing to be thought of when putting rubber drainage near large vessels at best in cases infected with B. perfringens it is a thing to be watched for, if the mortality statistics are to be kept low.

The closure of wounds is a thing that still occupies a prominent place in the surgeon's mind during my time at the twenty-second general we were doing secondary suture on all likely looking wounds and judging from the late articles it still is looked upon as a procedure which can be depended upon to shorten the soldier's stay in the hospital.

The method used at the twenty-second general for the localization, devised by the late Walter Dodd, M. D., of Boston, Mass., consisted of a screw eye fastened in the end of a wooden handle as a localizer in addition to the usual X-ray equipment. The patient is placed on an X-ray table with the tube beneath and by means of the fluoroscopic screen the region of the foreign body is located. The diaphragm in the tube box is then closed down to a 2-inch aperture and the tube carrier moved until the foreign body is in the center. The localizer ring is then placed over the foreign body, the screen removed and the ring marked with an indelible pencil. Now having the perpendicular position we open up the diaphragm and with the ring localizer on the skin with the screen we get two shadows, now by moving the tube we note they move with different rates of speed, by raising or lowering the localizer we soon get the shadows to moving at the same rate of speed. Now we make our second indelible mark and know that at the intersection of the two lines we will find the foreign body.

Amputation is a very rare operation in this war as compared with other wars of the past. I recall several cases in which several inches of the femur were missing. By means of a bridged plaster spica the length was maintained while treatment of a gas bacillus infection was carried out under the bridge. These cases were later bone grafted in England and have made excellent recoveries.

There are a few things which I believe are peculiar to this war, the first being "trench foot," a variety of frost bite or better "water bite," due to standing in cold water hours at a time. The first stage is one of erythema, the second one characterized by blebs and in the third or most severe variety we have death of the part. By having better fitting boots that are carefully greased, a change of sox, and by giving the men a chance to dry their feet occasionally conditions have been improved.

Gas is of two varieties. (1). Shell gas. (2). Drift gas depending on the way it is liberated upon the enemy. It causes lacrymation and in larger amounts asphyxiation. A bad case on admission will have a subnormal temperature, slow, pulse, restless and anxious with a cyanosed face with considerable dyspnoea, if the case lives it passes through the asphyxial stage then the quiescent stage followed by a stage in which a productive bronchitis is the notable thing. The treatment consists in stimulation at first and later treating the symptoms as they arise.

1. Abundant supply of heat and air.
2. An emetic in case of cyanosis.
3. Administration of expectorants.
4. Oxygen inhalations.
5. Morphia as needed.
6. Pituitary extract for cardiac failure.
7. Liquid.

Liquid fire which is petroleum under pressure squirted through a hose and ignited as it leaves the hose has been used to some extent though with poor results.

## First Aid to the Injured.*

James C. Tucker, M. D., Long Pine.

In taking up this very important work of the medical department I will only attempt to give a brief resume of the very essentials. A great deal of my paper is simply copied from outlines of First Aid taken from drill regulations and service manual for Sanitary Troops, United States Army 1914, as it is given there very briefly and explicitly.

---

*Read before the Nebraska State Medical Association, Lincoln, May, 1917.

Most of the first aid work in war under present conditions is done by the individual soldier acting alone or with one or two helpers, it is important that his training should be largely individual and such as will develop self reliance and resourcefulness.

The purpose of any teaching upon first aid, or early assistance of the injured or sick, is not only to enable one person to help another, but in some measure to help himself. In our army in the field each man is supplied with a first aid packet and instructed in its application, either on himself or a comrade. Each first aid packet contains:

1. Two bandages of absorbent sublimated (1-1000) gauze, 4x84 inches.

2. Two compresses of absorbent sublimated (1-1000) gauze, each composed of one-half square yard of gauze, folded so as to make a compress 3½ by 7 inches. One compress is placed lengthwise in the center of each bandage and retained in position by sewing along one end and across the center. The loose end of the compress is then folded on the sewed part and held by one or two stitches, thus making a compress 3½x3½ inches; each bandage thus prepared to be rolled loosely from each end, with the roll toward the back of the bandage, until the compress is reached. The latter is now folded through the center and the flattened rolls of the bandage laid on either side of the folded compress; each bandage then to be wrapped separately in parchment or waxed paper.

3. Two No. 3 safety pins wrapped in waxed paper. The two compresses and the safety pins are then wrapped together in tough paper on which simple directions for application are placed.

The packet thus prepared is placed in a heremetically sealed metal case with a suitable arrangement for easy opening. All contents of the case are sterilized. The dimensions of the case are about 4x2¼x1½ inches. The words "First aid packet, U. S. Army" are stamped on the metal case. Also directions for opening and the manufacturers name and date of contract are given.

One of the very important duties of medical officers is the teaching of first aid to the enlisted personnel of the medical department and of the line. Most of the men are intelligent enough to grasp the fundamental principles of first aid, and no doubt many infections will be prevented by this teaching. The first aid packet is well worth while if properly applied. Its possession gives a man a feeling of security, as it can be put to so many uses, such as (1) sterile dressing, (2) bandage, (3) tourniquet, (4) sling, and so on.

Each hospital corps pouch and orderly pouch is supplied with tubes of iodium potassium iodide and a bottle for making up iodine solution. The prescribed treatment is for the hospital corps man after the dressing is applied to pour on some of the iodine slowly over the dressing. In instructing the line men the iodine part of the technique if left out, as they are not supplied with this. Generally this is all that is necessary for the first treatment, and sometimes it is all that is needed for several days.

The essential treatments to be taught men in first aid work are:

1. Protect all open wounds and punctured wounds as quickly as possible by the intelligent application of a sterile dressing, laying especial emphasis on the importance of not handling or manipulating the wound in any way in which infection may be introduced.

2. The control of hemorrhage by (a) covering the part with a sterile dressing, (b) compression over the vessel supplying the part, (c) tourniquet if necessary, (d) keeping a patient who is bleeding, quiet.

3. Immobilization of fractures.

4. Administration of tonics and stimulants and doing other little things which will contribute to the safety and comfort of the injured.

One of the chief and most important facts to drill into the men is to never touch the wound with anything unclean. Apply a sterile dressing. Hands off an open wound is an axiom.

In the European armies First Aid is carried out with essentially the same material as in our own army, each soldier is supplied with a first aid packet practically the same as in the U. S. Army, with the exception that it contains a small ampule of iodine, protected in a metal box. During the present war they have added antitetanic serum to the dressing station equipment and the wounded get a subcutaneous injection as soon as they reach the dressing station. This was made necessary owing to the great number of tetanus cases which developed early in the war; this practice has been the means of saving a great many lives.

As to the improvisation of dressings for first aid work I think that can be passed over as it is seldom called for, as each man before going into action is supplied with a first aid packet as described above and each hospital corps man and orderly carries a pouch with several sterile dressings and bandages, and more can usually be quickly obtained from the regimental aid station. No other material can be considered sterile.

In the matter of splints much ingenuity and individual adaptability can be used. Each corps pouch is supplied with a small piece of splint wire which is very convenient but not adequate for all fractures. On a battle field usually something can be found which will answer for a temporary splint. For most fractures of the forearm the coat sleeve by drawing it taught and pinning or buttoning to the front of the coat will answer for both splint and sling. The same will answer for some simple fracture of the upper arm and of the clavicle. Shingles, splinters, and pieces of boards, carbine boots, bayonets, scabbards, tin from cans, branches from limbs, twigs, or bunches of coarse grass, muskets, leather leggins, whips, or in fact any material which is at hand must be made to serve, blankets, overcoats or other coats, rolled from each side, to form a trough and then reinforced and strapped or bandaged on make very efficient temporary extremity splints. In case of the lower limbs one may be bandaged or strapped to the other with a pad of clothing between which makes a very satisfactory splint or temporary transportation. For the clavicle a very good temporary dressing is made by pinning the sleeve of the upper arm to the back of the coat and then pinning the coat sleeve at the wrist to the chest, elbow flexed. In field work it is simply a proposition of using the material at hand to the best advantage; a little practice and care will accomplish much.

### Improvisation of Litters.

Many things can be used for this purpose; camp cots, window shutters, doors, benches, ladders, etc., if properly padded. Litters may be made with sacks or bags of any description, if large and strong enough, by ripping the buttons and passing two poles through them and tying cross pieces to the poles to keep them apart, two, or even three, sacks placed end to end on the same poles may be necessary to make a safe and comfortable litter.

Bedticks are used in the same way by slipping the poles through holes made by snipping off the four corners.

Pieces of matting, rug or carpet trimmed into shape, may be fastened to poles by nails or twine.

Straw mats, leafy twigs, weeds, hay, straw, etc., covered or not with a blanket, will make a good bottom over a frame work of poles and cross sticks.

Better still is a litter with bottom of ropes or rawhide strips, which in turn cross each other at close intervals.

The usual military improvision is made with two rifles and a blanket. Owing to the shortness of the present rifle it is of little value for this purpose.

---

## Double Ureterostomy for Inoperable Obstruction of the Ureters.

C. A. Roeder, M. D., Omaha.

One might well have chosen a happier topic but as the common narrations are singularly wanting in instruction I feel that accurate case reports are much more valuable. Therefore I wish to present an unusual procedure on a case of bilateral inoperable ureteral obstruction, a condition we all know signals the oncoming exitus as not far distant.

Malignancy developing in the path of excretions is often greatly retarded if these excretions are permanently withdrawn. We have for example colostomy for inoperable cancer of the rectum, which even with a marked development of carcinoma here, allows many patients a considerable period of very comfortable existence. They have been known to be alive ten years and more after, the growth apparently almost at a standstill. The resistance of the patient to this foreign protein is also an important factor, some having even spontaneously recovered. Colostomy has lost a great deal of it's repulsiveness during the past few years, owing to improved surgical technic and comfortable and efficient receptacles, and is far from uncommon, allowing patients to proceed with active vocations.

An elective ureterostomy is entirely new to a great many medical men and is in its infancy, having been performed only a few times; but with proper indications and technic I feel sure it has a definite place. As with colostomy the patient must have a clear understanding of the nature of the operation and if possible be possessed of a mind strong enough to withstand criticism from various sources afterward. How frequently our most heroic and successful endeavors are met with marked lack of appreciation, aggravated by a few physicians who see the patient afterward. Quite frequently the reverse is true.

If both ureters are blocked by inoperable new growths or by extensive development of scar tissue following multiple operations, which is not infrequent at the base of the bladder, and the ureters have become so dilated and thin that an anastomosis to a new era of the bladder is impossible, we have left two procedures. First, a ureterocolostomy—joining the ureters to the colon. This requires considerable surgical resistance on the patient's part and ureters of enough vitality and propulsive power to inject the urine into the bowel as the ureter is imbeded obliquely (Coffee) in order to form a valve which is supposed to prevent a reflux of colonic contents. Second, a ureterostomy—bringing the ureters through the abdominal wall, front or back. It is an operation of last resort for kidneys and ureters almost destroyed by back pressure and needless to say the patient is in a corresponding condition, as displayed by the case to be reported. By this method the only resistance to the flow of urine will occur at the distal opening of the ureters, caused by the contracting skin margins and unlike the former method is easily under control. Ascending infection is the principle sequence of both methods, but with the latter pelvic lavage can be frequently applied and the urine collected for analysis as desired.

I prefer the technic I used with the case below, because the relatively small McBurney incision on each side allows ample exploration of the ureters down to the bladder. Before amputating with the cautery the distal portion can be probed to determine the degree of stenosis and a sufficient length of ureter can be obtained for carrying the urine through the abdominal wall, allowing three to four inches projecting beyond the skin surface which later contracts and sloughs back to the skin margin. The proximal end which is to be brought to the surface can be seized with a long curved clamp through the McBurney incision after being freed from the peritoneum and presented at any elective point where a small one-half inch counter incision meets it. In this way we have a small wound in back which is not contaminated, painless and healed in a few days. The McBurney incision in front, although containing a small drain for a few days does not interfere with the patient being up in 24 hours or just as soon as his strength permits.

Case Report: June 1914. Patient C. L. C., Palmer, Neb. Age 66.

Family and early history negative. Comes complaining of painful and frequent urination, with severe pain in the right costo-vertebral angle and general loss of strength. In 1902 had a prostatectomy performed elsewhere by the perineal route for urinary obstruction, which had been coming on for three or four years previously. Was quite well for about three years when trouble returned and six years following the first operation had a second operation again by the perineal route, the surgeon reporting that he removed only a part of a bladder tumor. Following this the perineal sinus never completely closed, requiring a large pad worn constantly. A general debility with bladder disturbance ensued, with a return of all the symptoms in an aggravated form; urinating every hour during the day and getting up from five to ten times during the night. The urine was constantly mixed with large quantities of blood and pus. There has been a gradual loss of strength and flesh until at present dyspnea is constant with marked chills and fever.

The examination displayed an emaciated dejected individual, marked dyspnea, oedema, anemia, low blood pressure of 80 systolic, pulse 100 and small volume; a clinical picture more clearly understood than defined. Urinary obstruction in the early stages is accompanied by high blood pressure but this patient had passed beyond that point. A catheter obtained a trifle over 15 c. c. residue urine, containing large amounts of macroscopic blood and pus. The cystoscope entered the bladder with very little obstruction and after thorough irrigation I found the trigone completely displaced by large bands of scar tissue interspersed with areas of tissue resembling malignancy which bled freely. No ureteral openings were found and indigo carmine injected hypodermically did not appear in the bladder in 30 minutes. It was evident that the ureters were obstructed on both sides. Finger in the rectum found the original prostatic bed twice normal in size, rigid, tender and interspersed with nodules one-quarter inch in size.

It was evident that if some means of relief was not forthcoming the end was not far off. The patient was told that the ureters were obstructed and not the bladder and that an operation on the bladder would be useless. The following was suggested and eagerly accepted, viz: possibly an anastomosis of ureters to the colon or more likely a direct drainage to the surface of the skin.

Under spinal anesthesia both ureters were explored through a McBurney incision. They were found greatly dilated to about three-fourths of an inch in diameter and the walls so thin that urine and pus inside were plainly visible. An anastomosis with such tissue was impossible so they were probed and both found almost completely obstructed by the infiltrated bladder wall. They were amputated with a cautery about three inches above the bladder and the lower end tied and inverted with several mattress sutures of chromic gut. The proximal end was seized with a long curved clamp, after being freed from the peritoneum and placed against the posterior abdominal wall about one inch below the inferior pole of the kidney. While held there a small half-inch counter incision from without met the clamp from within and the ureter was brought through and amputated about three inches from the skin surface. The patient immediately picked up and in a short time was up and around greatly improved. His wife was informed that he would live about six to nine months but greatly to my surprise is alive today, December, 1917, and for his age is fairly well, wearing a rubber belt, which catches the urine. Unfortunately his appreciation has long since been carried away by criticism from various sources where such a procedure had never been heard of before; hence the importance of preparing the patient's mind before performing the operation. In this case the operation gave untold comfort besides adding at least three and one-half years of life and possibly more and I can not help but feel that it offers the only method of relief for ureters in this condition to intelligent patients so unfortunately afflicted. The duration of life may signify this obstruction as non-malignant, but nevertheless there was no other way of treating it.

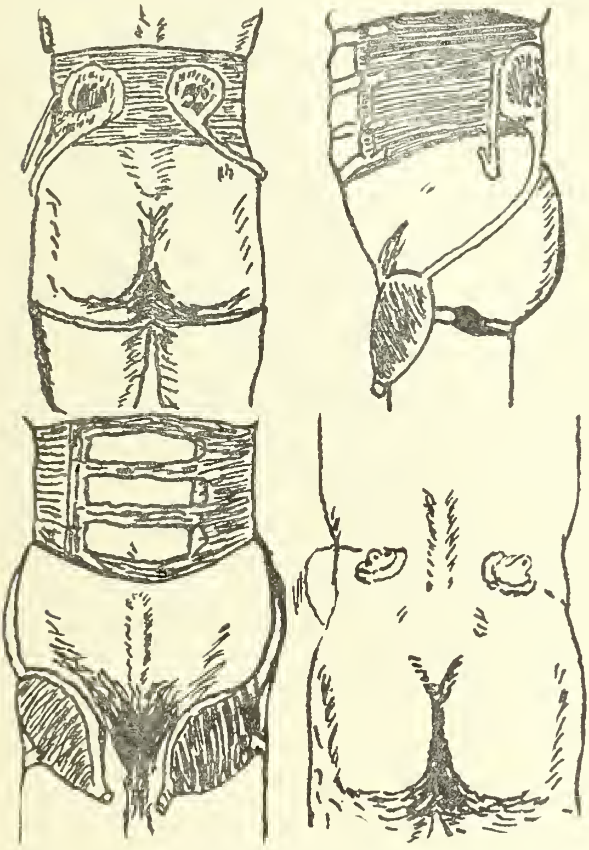


Fig. 1.—Tracing after Peterkin: The belt is broad and two rubber cups fit over the ureteral openings in the back. The urine is carried around to rubber bladders in front allowing the patient to empty them in a natural manner.

G. S. Peterkin (Surgery Gyn. and Obst., March, 1914) reports a case of total cystectomy with implantation of the ureters into the back with good recovery, the patient alive and quite well for four years later. For those interested I wish to append his bibliography. The illustrations are copied from his article.

### Bibliography.

Hagner, F. R.—Report of a Case of Extirpation of the Bladder for Malignant Diseases. Med. Rec., 1912, Oct. 19.

Ibid.—Removal of Carcinoma of the Fundus of the Urinary Bladder. Ann. Surg., Phila., 1910, Nov., 654.

Rovsing, Th.—Total Extirpation of the Bladder, with Bilateral Ureterostomy. Arch. f. klin. Chir., lxxxii, No. 4.

Ibid.—Extensive Removal of the Bladder Wall. Mem. Int. Ass. Urol., 1911.

Watson, Francis S.—The Surgical Treatment of Vesical Papilloma and Carcinoma. Urol. & Cutan. Rev., 1913, Feb.

Von Rihmer, Bela.—Total Extirpation of the Bladder. XVI. Med.-Cong., Budapest, 1909.

Petrow, N. N.—Removal of Bladder for Carcinoma. Deutsche Ztschr. f. Chir., 1910, civ, 365.

Harris, M. L.—Removal of the Bladder and Prostate for Carcinoma through a Suprepubic Opening. Ann. Surg., Phila., 1910, Oct.

MacGowan, G.—Resection of the Bladder for Malignant Disease. Report of Four Cases. Northwest Med., 1909, Nov.

Kohlmann, W.—Total Extirpation of the Urinary Bladder. South. Med., J., 1908, Sept.

Bovee, J. W.—Total Extirpation of the Urinary Bladder. Am., Med., 1901, July 1, 58.

Primrose, A.—Transperitoneal Resection of the Bladder. Ann. Surg., Phila., 1910, Dec.

Mayo, C. H.—Exclusion of the Bladder; and Operation of Necessity and Expediency. J. Am. M. Assn., 1913, June 28.

Ferron, J., and Nadal, P.—Tumor of the Bladder. Ann. d. Mal. d. Org. Gen.-Urin., 1910, No. 9.

O'Neill, R. F.—Observations on Recent Cases of Bladder Tumors at the Massachusetts General Hospital, with Special Reference to Operative Technique. Boston M. & S. J., 1913, 305.

Riese, H.—Cancer of the Bladder. Deutsche Med. Wchnschr., 1911, Sept. 28.

Pilcher, P. M.—Intraperitoneal Operation for Extensive Carcinoma of the Bladder, with a New Method of Treating Divided Ureter. Ann. Surg., Phila., 1911, Nov.

Tennant, C. E.—Intraperitoneal Cystotomy. Ann. Surg., Phila., 1910, Nov.

Judd, E. S.—Tumors of the Urinary Bladder. A Study of 114 Cases. J. Ark. M. Soc., 1912, Aug.

Caulk, John R.—Bladder Tumors. Interst. M. J., 1911, Nov.

Babcock, W. W.—Spinal Anaesthesia; with Report of Surgical Clinics. Surg., Gynec. & Obst., 1912, xv, 606.

Krotoszyner, M.—Choice of Anaesthesia for Operations on the Genito-Urinary Tract. Am. J. Urol., 1908, Jan.

Barker, A. E.—Experiences with Spinal Analgesia, with References to 2354 Cases. Brit. M. J., 1912, 597.

Gray, H. T., and Parsons, L.—Blood-Pressure Variations Associated with Lumbar Puncture and the Induction of Spinal Anaesthesia. Quart. J. Med., 1912, April.

Brainbridge, W. S.—Spinal Analgesia; Development and Status of the Present Method. J. A. M. Assn., 1912, 1855.

A Few Remarks Concerning 47 Operations for Tumors of the Urinary Bladder, Reports of Hartmann's Clinics, 1912, 4th Ser., 207.

## Acute Gonorrheal Urethritis.*

H. R. Brown, M. D., Beatrice.

It is not my intention to make a complete survey of this subject, nor to present any new method of treatment, but rather, to indicate the dangers of some of the old and common methods of treating acute gonorrheal urethritis.

When we consider the frequency with which it occurs, the resistance it offers to treatment and the danger it does to innocent persons, it becomes a question of great importance. The question of how best to treat it, deserves the time and the attention that the chairman has seen fit to assign to it.

The general practitioner as a rule does not care to devote the time, or give the attention necessary, to properly instruct his patient and treat a case of acute gonorrheal urethritis. I have had some few chronic cases referred to me where the patient stated that the physician did not even make an examination, but took the patient's word for the diagnosis and prescribed an injection, some harmless medicine internally, told the patient not to drink alcohol and did not request a return visit. The final result of such treatment is that these patients become gonorrhea carriers. They are in a way, not responsible since the physician did not treat it seriously, and for this reason with a great many of the laity the disease is considered a joke.

I feel it will be a great step toward eradicating the disease when it becomes compulsory for venereal diseases to be referred to a specialist, hired by the state or local district whichever it may be, where said cases will be treated scientifically and kept under observation until cured as far as a cure is possible.

The treatment twenty years ago was generally administered as follows: a piston syringe was put into the hands of the patient, (capacity of syringe about one ounce) a weapon which in my opinion is responsible for our failure to cure these cases. Injections, antiseptics, astrigents and anesthetics were used. Following such treatment there arose many of the complications of gonorrhea.

It must be said that thus far the treatment has been entirely unsatisfactory. Progress has been good but slow. Thousands of cures and specifics have been exploited but most of them have been discarded, and we are all forced to resort to the old drugs though the methods of using them is now somewhat modified. Irrigations formerly much used are now employed much less by men who are fairly close observers. An irrigation in what ever way we use it, or whatever medication we may add, has its disadvantages. It throws a rather forcible stream along the delicate mucous membrane, causing more or less damage and opening up areas or deeper infections. I have seen rather severe hemorrhages follow irrigations.

The first step in determining upon a method of treatment of acute gonorrheal urethritis is to have a clear conception of the nature and extent of the disease process. Typically gonorrhea is an infection of the whole urethra, after the end of the first week or ten days. There is some difference as to the date at which infection of the posterior urethra takes place; it being earlier in virulent infections than in those of a mild degree, but in the majority of cases posterior infection does take place and at a comparatively early date.

It is possible for the typical symptoms of posterior urethritis to be entirely absent and only a very faint cloudiness of the second urine be present and yet the posterior urethra may be the site of disease. From the first, gonorrhea is an infection of the submucous tissues rather than a surface inflammation. There is no known chemical germicide capable of peneterating the tissue and acting on the gonococci which lie buried beneath the surface of the mucous membrane, that will not as well injure the mucosa to a degree. It is evident that the elimination of the disease can only be accomplished through the natural protective and reparative process of the tissues or possibly through employment of certain physical agencies.

---

*Read before the Nebraska State Medical Association, Lincoln, May, 1917.

As soon as gonococci enter the urethra they set up a hyperemia lasting from twelve to thirty-six hours, and during this time it is possible to abort a small per cent of cases by inserting a few drops of two per cent silver nitrate solution into the meatus and fossa navicularis, using an ordinary eye dropper. If the disease is not aborted the hyperemia is followed by an exudation of the polymorphonuclear lucocytes, lmyphocytes, endothelial leucocytes, serum and in severe cases red blood cells. The polymorphonuclear leucocytes come directly from the blood vessels and they act as phagocytes, especially in the acute stage, and are aided largely by ferments generated by the lymphocytes, helping to neutralize the toxins and to destroy the organisms. In this way nature is doing her best by setting up a phagocytosis.

Therefore the treatment at this stage should not be an astringent to suppress the discharge but rather some mild antiseptic to help destroy the organisms as they reach the surface of the urethra, and there is nothing which equals the efficiency of the silver salts.

My local treatment for acute gonorrheal urethritis the past year has been varied somewhat from that described by Dr. Henry J. Millstone of South Chicago. In all cases possible I have the patient come to the office for irrigation and treatment daily. Our aim should be to avoid pushing the pus into the posterior urethra, and for this reason I insist upon the patient coming to the office for treatment. It is not wise to trust the patient with a syringe in the very acute stage. We may caution him against using force and the folly of using strong solutions but he thinks the rapidity of his recovery depends upon the force and strength of the injection he uses, and this is the evil that is responsible for most of our complications. We should also prevent the patient from doing any damage to himself by self medication. I instruct the patient to come to the office the second day with the bladder full, have him urinate, retaining a part. I then introduce slowly with an air pressure urethral syringe two drams of very warm saturated solution of boric acid which he retains five minutes and then the patient voids the remaining part of urine. Two drams of .25 to .5 per cent protargol is then introduced slowly, the meatus lips are then closed by pressure of the thumb and forefinger and the penis is massaged gently so as to aid the solution in getting well into the crypts and lacunae. This is retained five minutes and then the greater amount is allowed to drain out and the penis is allowed to hang in a clean gonorrheal bag without gauze or cotton over the meatus as this interferes with the proper drainage of pus.

The above treatment is carried out each day until the pus begins to cease and a serous discharge appears which as a rule is about the fifth day. I then prescribe an air bulb syringe of two drams capacity and three ounces of a .5 per cent solution of protargol for the patient's use, and instruct him how to inject the urethra himself every four hours, telling him to urinate first and then gently and slowly inject the solution which is to be retained for three minutes. This procedure is to be repeated, thus making two three-minute injections every four hours. In the majority of cases after the treatment during the patient's visit on the second day I find the microscope shows no gonococci and the patient's injections are decreased and discontinued two day's later, which is seldom more than nine days after infection. If the infection should become posterior, I use a double air urethral syringe, so as to inject the posterior urethra and treat with a daily irrigation the same as for an anterior infection.

As to internal treatment, I think practically all of the medical profession are convinced that it is useless, except in generalized toxemia or where the organisms or their toxins localize in a joint. The acid urine seems to be a factor in traumatizing the acutely inflamed tissue and to correct this the urine should be alkalinized. To accomplish this there is no better preparation than sodium bicarbonate administered three times daily.

Diet regulations are moderate and the patient is instructed to refrain from alcohol and highly seasoned food, to drink freely of water and to exercise moderately.

As to vaccines, I must say, that in my hands they have been very unsatisfactory. Like other therapeutic measures, vaccine therapy was in the beginning of its use highly extolled, but in the acute forms of the disease the results have been very disappointing.

## The Tonsil in General Diseases and Its Treatment by the General Practitioner.*

Robt. T. Jones, M. D., Edgar.

Few subjects in medicine have given rise to more frequent discussion than the tonsil, although they have been recognized as the source of injury to the patient and records of their removal date as far back as 10 A. D. Their full significance as a focus of general infection has not been recognized until the last decade.

Since the advent of the modern microscope and through it the discovery of distinct organisms as a cause of disease, many diseases that were formerly thought to be that of intoxications are found to be truly bacterial or caused from products of bacterial activity.

Captain Catlin in 1861 contended in his pamphlet that the tonsils and adenoids were responsible for all ills of mankind. That he was overzealous in his condemnation of the tonsil we are all agreed, but when we consider all the ailments that the tonsil may be primarily and secondarily responsible for we must be kind in our criticism.

The function of the tonsil is not known. The theory that, situated at the entrance of air and food to the body, they act as a bearer to the entrance of bacteria, has its supporters. That the tonsils with their numerous crypts, filled with cast off epithelium, decomposing leucocytes, bacteria and detritus, supplied with heat and moisture make an ideal incubator for the growth and development of bacteria and their products, is supported by many and is substantiated by bacteriological experiments and clinical proofs.

An especial point in the anatomy of the tonsil (1) is the plica triangularis, a thin triangular fold of mucous membrane which stretches from the anterior palatine arch backward for a variable distance over the tonsil. Its apex is directed upward towards the soft palate, its base towards the tongue and its free margin crosses the tonsil. This membrane often becomes adherent, including a more or less distinct space between itself and the tonsil, in which disease processes are often set up. This space should be carefully examined in looking for a focus of infection, by drawing this tissue forward with a little pressure pus and detritus may often be expressed, in even apparently healthy tonsils.

Poynton and Payne (2) in their studies of rheumatism were pioneers in the work of focal infection. They isolated an organism from the tonsils in persons suffering from rheumatism and injected them into rabbits causing arthritis, endocarditis and subcutaneous nodules.

Davis (3) in his studies of tonsils found hemolytic streptococcus in tonsils of twenty-five out of twenty-eight suffering from arthritis. Arthritis was produced in rabbits by injection of the bacteria. In ten cases of endocarditis studies, six showed hemolytic streptococcus, injected into rabbits, four developed arthritis, two of the remaining cases showed pure cultures of pneumococcus and two of pneumococcus mixed with other bacteria. Rabbits injected with these strains of pneumococcus, two developed vegetative endocarditis.

Rosenow (4) in his interesting experiments has shown the relationship of tonsils and general systemic diseases. He has grown streptococcus from the throat and under various modes of culture has changed streptococcus to pneumococcus and vice versa at pleasure.

Detwiller and Robison (5) carrying out Rosenow's technique, isolated several strains of streptococcus viridans from the blood of persons suffering from infective endocarditis, cultures were made and injected into rabbits with interesting results. In all the rabbits examined at necropsy heart lesions were found in fifty-six per cent, endocarditis in forty per cent, paricarditis in thirteen per cent, thirty per cent giving a negative result. They found that streptococcus viridans obtained from tonsils of people suffering from endocarditis produced like results when injected into rabbits. Streptococcus viridans obtained from tonsils, gums and teeth of students in the laboratory produced cultures that caused heart lesions in eighty per cent of rabbits, giving myocarditis, sixty-seven per cent, endocarditis fifty-eight per cent, aortitis thirty-two per cent, pericarditis twenty-two per cent and arthritis twelve per cent. As seen in the last mentioned experiments, streptococcus viridans obtained from normal throats as well as from those suffering from lesions, when injected into rabbits, caused disease. The clinical proof of marked improvements following tonsillectomy in persons suffering from arthritis and various heart lesions, brings us to the conclusion that tonsils not only harbor pathogenic bacteria but serve as suitable media for the growth of virulent bacteria and their toxins, and perhaps furnish the necessary conditions to change an ordinary streptococcus into one having special characteristics, possessed with special affinity for various structures of the body.

---

*Read before the Nebraska State Medical Association, Lincoln, May, 1917.

Among the many diseases to which tonsils are the portal of entry of infection may be mentioned arthritis, endocarditis and chores. These are considered together on account of their close association. The history of chorea in rheumatic families, of tonsilitis with chorea, of endocarditis with chorea and rheumatism and the finding of the diplococcus rheumaticus in endocarditis, arthritis and in the pia mater (6) of patients with chorea are conclusive evidence of the tonsil as the source of infection.

Case No. 1.—Girl fourteen has chorea, tonsils infected; mother is recovering from a severe attack of articular rheumatism, of six weeks duration. Father had an attack of tonsilitis two months previous to mother's illness. Recovery on anti-rheumatic treatment.

Case No. 2.—Boy thirteen, has chorea, tonsils severely inflamed. Father has had repeated attacks of rheumatism and tonsilitis and peritonsilar abscesses. Boy and father submitted to tonsilectomy with complete recovery in both cases.

Case No. 3.—This case, which ended fatally, well illustrates the seriousness of tonsilar infection and the association of endocarditis and rheumatism. Boy fourteen from healthy family, had endocarditis two years ago, more or less tonsilitis for years. April fourth had an acute attack of tonsilitis, was given the ordinary treatment for tonsilitis including full doses of sodium salicylate operation advised. April twenty-sixth has a little dyspnoea, slight fever, slight murmur over mitral valve. May second temperature ranging from 97.4 to 100.4, pulse ninety-six to one hundred six, tonsils filled with yellow exudate, heart murmur increased. Patient seen by internest from Omaha. Patient died seventeenth day of illness. Special points observed: First: The endocarditis soon followed an attack of tonsilitis. Second: Developed arthritis a few days after a diagnosis of endocarditis was made. Third: A marked yellow exudate developed on the tonsils. Fourth: The low virulence as seen by the low grade of temperature and comparatively slow pulse.

Among other diseases in which a diagnosis of tonsilitis may be an etilogical factor are ear troubles, simple and tubucular adenitis. Kerley (7) says tubercular adenitis is rare in children who have had their tonsils and adenoids properly removed; pharyngitis, laryngitis, bronchitis and pneumonia malnutrition in children with enlarged glands at the angle of the jaw, are often relieved by tonsilectomy. I have seen three cases of acute appendicitis immediately following an attack of tonsilitis, also nephritis and perinephritic abscess (8) herpes zoster (9) neuritis, erythma. I have had one case of hyperthyroidism with pulse 120 to 130; tremor and restlessness, relieved of the symptoms by removing the badly infected tonsils.

I have found the medical treatment of diseases which are the result of chronic infection of the tonsils, very rebellious and especially is it true of endocarditis. The acute cases are more amendable to treatment; I give full dose of sodium salicylate, clear out the tonsilar crypts, and especially the recess behind the plica triangularis, frequent gargles of alkaline anticeptic lotions, and an ice bag to the throat.

Not all tonsils should be removed, but if diseased, and the patient is suffering from a chronic or recurrent infection of the tonsils an early operation is advisable, not during an acute attack, but during an interval. Patients and parents have often been disappointed in the results of operations and have often looked on the operation with disfavor. In looking into these cases I find failure to make a correct diagnosis or incomplete enucleation of the capsule often responsible.

I find a complete tonsilectomy under a general anesthetic often times to be a formidable undertaking, and have been surprised to find in some cases, where I felt confident that I had done good work, the patient still suffering from some of the preoperative symptoms and on examination have found a small part of the tonsils still intact. The method of tonsilectomy practised by Justin Matthews (10) has given me very good results. The technique is easily acquired, and I have never had a patient return with a part of the tonsils remaining for my inspection. With this method the deeply submerged tonsil is as easily removed as the hypertrophied and everted tonsil.

I use the following instruments: Beck's tonsil syringe, Robertson's knife, Burrow's tonsil forceps, Brown's snare, a tongue depressor, a common wire applicator, hemostat and scissors. The throat is first painted three times with ten percent solution of cocaine. Inject about two drams of one-fourth of one per cent solution of novocain with two minims adrenalin about each tonsil, not into the tonsil. The tongue is depressed, bringing the tonsil into full view. The knife is inserted between the tonsil and the anterior pillar, low down, and cut upward to the upper pole of the tonsil. Press the knife a little backwards, cut one-third the way down the posterior border of the tonsil, keeping close to the tonsil. Now, usually without the tongue depressor, grasp the upper pole of the tonsil with the tonsil forceps, drawing inward and downward, and with the knife cutting and pushing, gently separate the tonsil from the constrictor muscle and its bed, to its lower attachment. The balance of the operation is done with thė snare.

I paint the cavity with equal parts of tincture of iodine and boroglyceride and watch for bleeding vessels. If these do not stop in a few minutes swab out the cavity with cotton on an applicator and catch the vessel. I have found that a large blunt pointed hemostat is best for my use as it seems to be easier to slip the catgut over the point, a procedure which is difficult for one with short fingers, but with a little patience the vessel is soon tied. The patient is given codein in quarter grain doses for the pain, sodium salicylate for three days and a bottle of alkaline antiseptic solution for a mouth wash.

Summary: Chronically enlarged tonsils are usually the results of repeated tonsilitis.

Buried tonsils are often very toxic and give rise to severe focal infection.

A diagnosis of the tonsil as seat of focal infection is made by exclusion. The tonsils may be innocent so far as appearance is concerned but complete cure is often obtained by their removal.

Many cases of endocarditis could be saved by an early enucleation of the tonsil.

Only complete removal of tonsils will insure results. Inasmuch as many cases of hemorrhage and fatalities are due to the anesthetic a good technique for the operation of tonsilectomy with a local anesthetic is desirable.

1. Cunningham: Textbook of Anatomy.
2. Poynton and Payne: Osler's Practice of Medicine.
3. Davis, D. J.: Bacteriology and Pathology of the Tonsils. Journal of Infectious Diseases, 1912. Page 273.
4. Rosenow, E. C.: Journal of Infectious Diseases. 1914. Page 1-32.
5. Journal of A. M. A., 1916, Vol. 67, page 1653.
6. Poynton: The British Journal of Children's Diseases, 1912. Page 49.
7. Kerly: Practice of Pediatrics, Saunders & Co.
8. Judd: Mayo Clinics, 1915.
9. Rosenow: J. A. M. A., 1915, Vol. 64, page 1968.
10. Mathews, Justin: J. A. M. A., 1916, Vol. 66, page 503.

### Discussion.

**Arthur L. Smith, Lincoln.**—One of the hysterical conditions spreading over the country, at the present time, is the removal of tonsils on the least provocation. As to chorea, in Johns Hopkins Hospital in 5,000 tonsilectomies of which many were for the cure of chorea, good results followed in a few, but in most of the cases there was no improvement after tonsilectomy. This work has been so thoroughly done, histories so accurately taken and the cases so carefully followed after the operation, that there seems to be no question about this reoprt. It has been shown recently that tonsils are not always primarily infected, but the abnormal condition present is secondary to infected teeth, sinuses and other infected areas which drain into the tonsil region. So, in my opinion, tonsils should only be removed when they are primarily infected and there is some other abnormal condition dependent upon this infection.

**A. G. Lueschen, Columbus.**—In addition to what has been said I wish to mention in using the snare to prevent hemorrhage after it is placed in position to cut off the tonsil very slowly, and we get less hemorrhage than when we cut it quickly. In using this technique the last few months I noticed that it fibrinates or clots the blood in the vessels.

I have had two cases of secondary hemorrhage after removal of tonsils and in each case I used coagulum as a hypodermic injection, and the hemorrhage stopped in fifteen to twenty minutes after the injection and no further trouble with these cases.

Sometimes when the pillars are very large we are quite apt to overlook small but dangerous tonsils, they look harmless, but contain infective foci. I had a case about a month ago which was referred by a general practitioner for examination. I very nearly overlooked a small tonsil for this reason, fortunately on close inspection I found the tonsil diseased and removed same. This patient was troubled with arthritis and since removal of tonsil the arthritis has left.

Another case of a lady, age fifty, who has had continuous tonsil trouble the past six months, and periodically all her life together with a lame ankle for which she had been treated considerably without relief. Tonsils were removed in the usual way and the patient recovered nicely and to her surprise she had not been troubled with her ankle since that time.

**F. S. Owen, Omaha.**—This is a very instructive and practical subject. There is no other of greater importance before the profession today. The tonsil should be seriously considered responsible for all the diseases mentioned by the writer, and perhaps for many others not mentioned in this category. It is fortunate for mankind that the importance of the tonsil in disease is so generally understood and that the means of disposing of it are so simple and sure.

It is now generally agreed that nothing short of the complete removal of the tonsils is to be considered. The method of operation is largely a question of adaptation, and each operator should be the judge as to the best method for him. Of prime importance is the removal of the tonsil without injury to adjacent structures, whatever method is selected for its performance.

Regarding hemorrhage which used to be the bugaboo of the profession, the present perfection of the technique of operation has almost eliminated this danger. However, secondary hemorrhages do now and then occur, and are sometimes very troublesome. For the past few months I have, as a routine, applied a preparation of oxbrain known as thrombo-plastin, with most excellent results. With its employment in over one hundred cases, I have not had the slightest post-operative hemorrhage. It is best applied by saturating with it a pledget of gauze of sufficient size to firmly fill the denuded fossa, and should be held firmly in place with a pair of forceps for the period of a few minutes.

**Robert T. Jones, closing:** I thank you all for your discussion of the paper. By injecting about two drams of novocaine solution into the peritonsillar tissue, the tissue is much distended. Now by keeping close to the tonsil but little surrounding tissue is included in the enucleation.

I have noticed that hemorrhage is more severe if a portion of the capsule is left. I have had but one case of severe hemorrhage that requires ligation, in about fifty cases in which this method of enucleation was used.

I had one case of secondary hemorrhage occurring seven days after operation, frightening the family. I was called but upon arrival I found the hemorrhage had practically ceased.

It is obvious that if the focus of the infection is elsewhere than in the tonsil, no relief could be expected by removal of the tonsil.

Only total removal of the tonsil will produce results. I have seen cases that seem to be made worse by a partial enucleation.

## The Internal Secretions.*

A. E. Guenther, Ph. D., Omaha.

The coordinated activities of the body are produced by two, fundamentally different, mechanisms. One of these is the nervous system. The other, a chemical mechanism, is one wherein the chemical products formed by one organ affect the cells of other and distant organs. Such active products may be designated, hormones. Since each cell of the body stands in chemical relationship to all the other cells of the body it is conceivable that each tissue may produce something of essential value to other tissues and organs and thus to the body as a whole. This view was held by Brown-Sequard in 1889 and led to the revival of an old therapeutic method, known as opotherapy which consisted in treating different organs by means of extracts of those organs. Brown-Sequard's generalization has not successfully withstood the results of modern investigations and it has become imperative that each substance, suspected of hormonic power, be subjected to minute experimental scrutiny in order to determine the part which it plays in influencing the activities of distantly placed organs of the body.

It must be obvious that the active agents of the secretions so long known as the internal secretions must fall into this general category and should be compared with those producing many other similar reactions by means of which chemical coordinations are brought about. Carbon dioxide, for example, is a universal excretory product. It is believed that it is formed by every living cell and emphasis is so frequently laid upon its being a waste product that it may occasion surprise to learn that its presence in the blood is an absolute necessity to the maintenance of life in the higher animals. For the presence of carbon dioxide in the blood constitutes one of the factors upon which the normal rhythmicity of the respiratory center depends. In ordinary words, carbon dioxide is the stimulus that keeps respiration going and this substance presents, therefore, an example of a chemical body, produced in the tissues at large and affecting, specifically, a minute portion of the medulla for the good of the entire body. Carbon dioxide may properly be termed a hormone.

An interesting example of hormonic action is found in the normal mechanism of pancreatic secretion. It is exceedingly doubtful whether the pancreas is excited to action by impulses coming to it over nerve fibers. Dolinsky, in 1895, showed that acids brought into contact with the duodenum promptly set up a secretion of pancreatic juice. Popielski added the further fact that severance of the splanchnic and vagus nerves did not alter the result and in 1902 Bayliss and Starling suggested that the excitation of the pancreas took place through the blood by the transformation of a substance prosecretin into secretin in the duodenal mucosa when acid comes in contact with it. They suggested that secretin is absorbed into the blood and carried to all portions of the body but exerting a specific stimulating effect only on the cells of the pancreas, the liver and the glands furnishing the succus entericus. Secretin is the hormone for which the term was originally invented by Bayliss and Starling and it is exactly of the nature of an internal secretion save in its origin. It is not produced by any special structure but by the ordinary cells which line the intestinal mucosa. To be a bona fide internal secretion it should be the product of specialized glandular tissues to be passed into the blood to exert a rather wide spread effect on many tissues. The active bodies of internal secretions and hormones are alike, chemically, in relative simplicity of structure. This is indicated by their withstanding prolonged boiling, setting them thus in sharp contrast to enzymes. Further, they are dialyzable; some have been obtained in crystalline form and one has been prepared synthetically. Many act instantly like drugs and having produced their effects are destroyed. Others operate more slowly, usually exerting their influence upon growth and nutrition. The drug like character of the action of these bodies should be emphasized.

---

*Paper read before the Nebraska-Iowa Pediatric Society, Nov. 20, 1917.

The more important of the glands yielding internal secretions may be briefly enumerated. They are the thyroids, the parathyroids, the thymus, the pituitary, the adrenals, the pancreas, the ovary and testis. Two general physiological methods are available by means of which the functions of the glands may be studied. One of these is the extirpation, partial or complete, of the gland and the subsequent close observation of symptoms displayed by the animal—with an interpretation of the latter. The other method consists in the injection of extracts of the glands and the subsequent interpretation of the effects produced. The former method leads to a diminution of the active material supplied by the gland normally while the latter method presumably leads to an excess. In this way it is possible to roughly approximate those experiments performed by nature when the glands furnishing internal secretions are involved in a pathological process. When this abnormal process excites the gland cells then it is presumed the internal secretion is passed into the blood in greater abundance; if, on the other hand, the pathological change destroys the gland then there results a diminution in the amount of the internal secretion in the blood.

### The Thyroids and Parathyroids.

In 1856 Schiff showed that extirpation of the thyroids is usually followed by the death of the animal in from one to four weeks. During this time the animal exhibits certain characteristic symptoms—muscular tremors, convulsions, cachexia, emaciation and apathy. These results when first announced were of great medical interest because surgeons had reported acute convulsive attacks or chronic malnutrition following complete removal of the thyroid in goitre operations. Furthermore, it was known that atrophy of the glands in the young led to cretenism, whereas, in older people it gave rise to the distressing mental deterioration, loss of hair and edematous condition of the skin of myxoedema. Schiff and others found that the evil results of thyroidectomy might be obviated by grafting pieces of thyroid in the body. Simple feeding of the gland suffices to produce the same effect. It is stated that in cases of myxoedema the human patient may be kept in perfect health by the administration of as little as 60 to 130 milligrams of thyroid every three or four days. Similar favorable results are obtainable by the substance iodothyrin, which Baumann separated from the gland in 1896. As is well known, iodothyrin is characterized by its large iodin content.

Many of the discrepancies in early experimental investigations were very likely based upon failure to recognize the existence of accessory thyroids which may be found along the trachea as far down as the heart, and a failure to appreciate the individuality of the parathyroids. When the parathyroids alone are removed the animal dies quickly with acute symptoms of tetany. Removal of the thyroids alone results in a condition of malnutrition resembling myxoedema in man. The tetany of parathyroidectomy shows itself as fibrillar contractions of the muscles, tremor, tonic and clonic spasms or intention spasms similar to the symptoms of tetany observed in infantile tetany. Macallum and Voegtlin report that injections of calcium salts remove the symptoms of tetany in both animals and human beings and it has been suggested that the parathyroids are connected with calcium metabolism leading to the neutralization of toxic substances produced elsewhere in the body. The thyroid, on the other hand, is assumed to form an internal secretion containing a specific hormone which acts as a chemical stimulus to other tissues increasing metabolism. When thyroid is fed to normal individuals there is a marked increase in the secretion of nitrogen and carbon dioxide. This is the basis for the use of thyroid in adiposity and if the administration is persisted in may cause cardiac symptoms and other disturbances such as are witnessed in exophthalmic goitre.

### The Thymus.

The thymus is assumed to furnish an internal secretion which until the age of puberty exercises an important function but subsequently is of subordinate importance. Removal of the gland in young dogs is reported to cause retarded growth of bony tissue resulting in a condition resembling rickets. In very young dogs the operation results seriously in coma and death. Injections of extracts of the gland produce no specific effects.

### The Pituitary.

In considering the physiology of the pituitary body it is necessary to differentiate the results obtained from the three parts of the gland—the pars nervosa, pars intermedia and pars glandularis. Owing to the intimate histological relations between the first two parts, extracts of the posterior or nervous lobe contain material from the pars intermedia, which, being glandular in structure, very likely furnishes the active ingredient of the extract. When such an extract is injected into an animal the heart rate is slowed and the blood pressure is raised. Most of the smooth muscle of the body, as in the intestine, bladder and uterus is made to contract—the effect upon the pregnant uterus being especially marked so that pituitary extract has found a place in obstetrical practice. These extracts, furthermore, have been shown to have a diuretic effect upon the kidneys and to act as a galactogogue to the mammary glands when in function. Extracts of the anterior lobe, when injected, produce no decisive results although there is no doubt that this lobe furnishes an important secretion. Robertson has recently isolated a growth accelerating principle from it which he has called Tethelin. Total hypophysectomy is a fatal operation in the course of a few days. The animal manifests a fall in temperature, an unsteady gait, rapid emaciation and diarrhoea. These effects are due to removal of the anterior lobe as is shown by the fact that removal of the posterior lobe alone is not fatal but is followed by a different set of characteristic symptoms. Among these a greater tolerance to carbohydrate foods paves the way to a marked increase in fat formation and obesity. If the operation has been carried out in a young animal the development of the sexual glands is arrested giving rise to a eunuchoid condition. Clinically, when the hypophysis is hypertrophied and presumably hyperactive, the effects show themselves in the growth of the skeleton. If this happens early in life the result is gigantism, while in later life, acromegaly is the outcome. On the other hand when there is reason to believe that there is diminished activity of the gland the effects usually observed are obesity and sexual infantilism.

### The Pancreas.

In 1889 von Mering and Minkowski showed that the pancreas produces an important internal secretion which plays an essential part in the metabolism of sugar in the body. This it does by furnishing an internal secretion indispensable for the utilization of sugar by the body cells. Extirpation of the pancreas leads to hyperglycemia and glycosuria and eventually death—the development of symptoms simulating that of diabetes in man. Considerable amount of evidence has accumulated to show that the particular tissue concerned in this function of the pancreas is that of the islands of Langerhans.

### The Reproductive Glands.

Some of the most interesting facts in the entire realm of the internal secretions are those found in the investigations upon the reproductive organs. Brown-Sequard shows that extracts of the fresh testis when injected under the skin have a remarkable stimulating action upon the central nervous system, improving mental and physical vigor in cases of general prostation, neurasthenia and in the aged. The general trend of opinion seems to be that the active hormones are formed by the interstitial cells of Leydig and not by the reproductive elements proper, so that it has been proposed to designate these cells, collectively, as the puberty gland. There is little doubt that the reproductive glands control the development of the sexual characteristics by way of the blood. When a young animal is castrated the secondary sexual characters and the sexual appetite do not develop.

Steinach reports remarkable experiments in which young males were first castrated and then had transplanted under the skin or into the peritoneal cavity the ovary from a female of the same species. In such animals the secondary male characteristics do not develop; the external genitals remain infantile and he takes on the female characteristics as shown by his size, the type of hair and by the development of mammae and nipples. The animal is feminized and is sought by the male as if it were a true female.

The internal secretions of the ovaries and testis are important not only in regard to secondary sexual characters but also in regard to body metabolism. In gynecological practice it is found that ovariotomy and its resulting premature menopause is often accompanied by distressing mental and physical symptoms, alleviated in some cases by the use of ovarian extracts. Ovariotomy in young animals prevents the normal development of the uterus and in adults causes it to undergo fibrous degeneration. A noticeable gain in weight is a frequent result. In osteomalacia removal of the ovaries has been said to exert a favorable influence on the course of the disease.

The recital so far given of the more striking facts of the internal secretions has given no hint of the functional interrelations existing between glands of internal secretions. This relationship is clearly seen between the reproductive glands on the one hand, and the thymus, the pituitary and the cortical portion of the adrenals, on the other hand. Castration or spaying causes enlargement of the thymus gland even in a mature animal. Castration in the male causes marked increase in the weight of the hypophysis; spaying has less effect. The adrenals, however, increase in weight in the males but diminish in weight in the females. Thymectomy accelerates the development of the reproductive glands while removal of the posterior lobe of the hypophysis retards their development. Removal of the thyroids leads to hypertrophy of the parathyroids so that they show cysts containing colloid. Tadpoles fed on thymus gland are stimulated to excessive growth while the metamorphosis to the frog stage is delayed. Feeding on thyroid gives contrary results; growth is inhibited and metamorphosis accelerated so that dwarf frogs are formed. During pregnancy the cortex of the adrenal gland undergoes hypertrophy while pathological changes affecting the adrenal cortex alone have been followed by precocious development of the sexual organs.

An enumeration in this manner of all the facts which have been brought to light illustrating the interdependence of the functions of the internal secretions gives but the impression of baffling complexity. No doubt many more facts must be elucidated by careful observation and experimentation until the secret is revealed by means of which the true significance and functions of the internal secretion may be established. It is to the great credit of Cannon to have done this partially at least in the case of the secretion of the adrenal medulla. Addison's account of the disease which now bears his name led Brown-Sequard to test the effect of removal of the suprarenal capsules in animals in 1856. He found this procedure to lead to a rapid death of the animal with symptoms of great prostration muscular weakness and great diminution in vascular tone. In 1895 Oliver and Schaefer discovered that injection of an extract of the medulla of the gland into the circulation of a living animal produced a slowing of the heart with a great rise in blood pressure. The latter effect is due to a wide-spread constriction of the arterioles, of short duration but frequently elicitable. Epinephrin, as the active constituent producing the constriction is named does not act directly upon smooth muscle fibers of the arterioles but upon a specialized receptive substance, the myoneural junction, where the sympathetic fiber unites with the muscle fiber. The effect is substantially that of stimulating the sympathetic nerve supply and gives the same end reaction. All the arterioles of the body are not constricted—those of the brain, the lungs and the heart being exempt. The plain muscles of the intestinal wall receiving their nerve supply from the sympathetics lose their tone and relax except at the sphincters. The dilator fibers of the iris are stimulated giving dilatation of the pupil; the salivary and the lachrymal glands secrete. The pilomotors over certain regions of the body contract making the hairs stand up. The heart beats with greater force; the effects of fatigue in skeletal muscle are lessened and relaxation is more rapid and complete; the coagulation of the blood is augmented; the bronchioles are dilated; the liver releases its store of glycogen and floods the blood with sugar.

Dreyer first demonstrated in 1899 that the secretion of epinephrin can be elicited by stimulation of the splanchnics and in more recent years it has been shown that sensory stimulation of various kinds can reflexly excite the secretion of epinephrin. Cannon and his pupils have laid stress upon the increased secretion resulting from strong emotional activity. The flight instinct and the pugnacity instinct are accompanied, in animals, by the major emotions fear and anger. These together with pain, are mental states which are very effective in increasing the activity of the adrenals. Both are frequently followed by enormous physical exertions in fighting or in flight to escape from danger. The muscular and nervous mechanisms are strained to the utmost. From this point of view we may understand the service rendered by the increased secretion of epinephrin. The cessation of the activities of the alimentary canal; the shifting of blood from the less insistent abdominal viscera to the organs immediately essential to life itself, such as the lungs, heart, central nervous system and muscles; the increased cardiac activity; the heightened blood pressure; the secretion of saliva; the hairs standing on end; the quick abolition of the effects of muscular fatigue; the mobilization of sugar in the blood as a ready source of energy and the increased coagulation of the blood are changes directly serviceable in making the animal more efficient in the struggle which fear or rage or pain may involve.

---

## Acidosis.*

Miles J. Breuer, M. A., M. D., Lincoln.

There is no subject today that is more talked about and less understood than that of acidosis. The aim in preparing this paper has been not to add anything original, but to sum up the literature, and present the subject as a clear and unified idea. That acidosis as a condition does exist, and in many cases quite unsuspected, has been demonstrated beyond much doubt. In view of the fact that proper handling of the associated acidosis will materially aid in the treatment and improve the prognosis of many common diseases, it will be readily appreciated that the nature of acidosis, its early diagnosis and treatment, is highly important to the practitioner; and a misunderstanding of it is a serious matter, in view of the harm that can be done by neglect and improper treatment.

Just as the body requires the maintenance of a fixed temperature equilibrium by a special mechanism, in order that it may carry on its functions, so, a definite acid-basic equilibrium, regulated by a sensitive mechanism and kept at a constant point regardless of external influences tending to disturb it, is necessary for life-processes. In normal health, there is a fluctuation of this equilibrium between acids and bases within narrow limits; in pathological states the variations are considerably wider.

The actual reaction of the blood is almost neutral, verging very slightly on alkalinity, and remains rigidly fixed, regardless of all extraneous sources or losses of acid or base. A very slight change in the actual reaction of the blood towards either acidity or alkalinity is incompatible with the continuation of life. By actual reaction is meant the hydrogen-ion concentration, a physico-chemical quantity; measured by physico-chemical methods, it is found to be very slightly less than that of distilled water. Titration with ordinary color indicators as phenolphthalein or methyl orange is too crude a procedure to be used for as delicate a distinction as this, as these indicators are themselves acids or bases, and effect more change in the reaction of the fluid than the quantity being measured. Acidosis, therefore, does not mean an acid reaction of the blood; such a condition would result in immediate death.

Acid is being continually formed in the various tissues during metabolism. Carbon dioxid (which in aqueous solution is carbonic acid), is the result of combustion in the tissues; sulphuric and phosphoric acids result from the oxidation of the sulphur and phosphorus of the ingested proteins; the dextrorotary lactic or sarcolactic acid is formed during the contraction of muscle. Lactic acid is also formed from dextrose under certain conditions, such as the lack of sufficient oxygen to oxidize the latter completely, in asphyxia, violent exercise, $CO^2$ poisoning; or in severe hepatic degenerations interfering with the functions of the tissues where the oxidation takes place. Fatty acids result from the breaking up of fats and from the deaminization of amino-acids. Acids are the most important waste-products of the body, and are eliminated by the lungs and kidneys. The acid is carried from the tissues where it is formed, to the excretory organs by the blood.

---

*Read at a meeting of the Lincoln Academy of Medical Science, May 24, 1917.

The factors which make it possible for the blood to transport such quantities of acid without suffering a change in reaction, or the body's lines of defense against acidity as they have been termed, are several in number. The first and most important is the action of the primary, secondary and tertiary phosphates, and the carbonates and bicarbonates of the blood. The salts of weak polybasic acids with strong bases are able to add or lose molecules of acid without change in reaction and without change in the quantity of the base. A molecule of sodium carbonate will pick up a molecule of $CO^2$ from the tissues, become a bicarbonate, carry it to the lungs and drop it, becoming a carbonate again. The concentration of acid is highest in the tissues, and therefore acid passes from them into the blood where its concentration is lower, and from the blood into the alveolar air, where its concentration is lowest, and whence it is continually eliminated. Respiration lowers the concentration of acid in the blood, and allows the higher concentration of the tissues to be removed. The presence of an excess of $CO^2$ in the blood stimulates the respiratory center, eliminating the acid more rapidly from the alveoli, and causing a more rapid passage of $CO^2$ from the blood. Other acids likewise cause an increase of acid elimination by respiration, by setting free $CO^2$ from the bicarbonates to be removed by the lungs, and leaving a neutral salt to be removed by the kidneys. In this case, however, base is lost to the body.

The second line of defense consists in the ability of the kidneys to eliminate an acid urine from an alkaline blood. The acid is in the form of phosphoric acid, which is carried by the blood to the kidney in the form of the neutral or alkaline phosphate, $Na^3PO^4$ or $Na^2HPO^4$, but is eliminated as the acid phosphate, $NaH^2PO^4$, thus economizing one or two molecules of base, which can return and carry back further acid radicals.

The third line of defense consists in the ability of the proteins to combine with appreciable amounts of acid, without producing a change in the reaction. A fourth line of defense, which is called upon only in emergency, lies in the ammonia. The nitrogen of the proteins, which is normally transformed into urea, is diverted in the form of ammonia to combine with the acids, and is eliminated in the urine in the form of their ammonium salts.

The blood therefore transports a steady stream of acid from the tissues to the excretory organs, equivalent to several hundred cc of concentrated hydrochloric acid every day, without undergoing more than a mere possible momentary local disturbance of that neutrality, slightly inclined to alkalinity, which is necessary for colloids to exist and functionate normally. The existence of an excess of acid anywhere in this chain of tissues, blood, and excretory organs, will interfere with the process of elimination, and cause an accumulation of acid radicals. As an excess of $CO^2$ is rapidly and readily gotten rid of, it is only the non-volatile acids that are able to cause this accumulation and consequent interference with $CO^2$ elimination. Acidosis is the existence in the body of an excess of acid radicals other than $CO^2$. Another commonly accepted definition, which amounts to the same thing, is that acidosis is a disturbance in the acid-basic equilibrium by which the power to resist acids is lowered.

There are four possibilities by which this condition of an excess of fixed acid radicals may be brought about.

1. Overproduction of acids.
2. Slow excretion and accumulation of acids.
3. Too rapid excretion of bases.
4. Insufficient supply or assimilation of bases.

An example of the first condition is found in the case of severe diabetes, when acetone, diacetic acid, and beta-hydroxybutyric acid are present in the urine. This is the condition which was originally signified by the term acidosis; it is now known as ketonuria. Later, when it was demonstrated that an increased coefficient of ammonia elimination in the urine signified the presence of an excess of acid in the blood, the term acidosis was understood to mean an increase in the ammonia coefficient.

The acidosis of severe diabetes, due to the presence of the ketone bodies, is the same as that appearing in starvation, and is due to the increased metabolism of fats in an imperfect manner in the presence of insufficient carbohydrate utilization. In diabetes or in starvation, the fats of the body are drawn upon but are not completely burned, because a certain "draft" from the combustion of carbohydrates is necessary in order to consume them efficiently, just as green wood requires a hotter fire. It has been demonstrated by isocaloric feeding experiments with a protein diet, that when the mixture of metabolites being oxidized in the body contains more than 3 molecules of higher fatty acid to one of glucose, then the body "smokes" with acidosis compounds, like an automobile with too much oil in the cylinders.

Another example of excessive acid production is found in the case of interference with liver function in severe degeneration as acute yellow atrophy, or in chloroform anesthesia, or in the toxemias of pregnancy. The oxidation of glucose and fatty acids takes place in the liver, and proceeds under normal conditions to $CO^2$ and water. In case the function is imperfect, the oxidation stops with intermediate stages in the form of fatty acids and ketone bodies.

An example of the accumulation of acid due to slow excretion, is found in the acidosis of nephritis. Here there is a retention of acid phosphates in the blood, due to insufficient kidney function. Ninety percent of the average urine phosphates consists of acid phosphates; in nephritis this percentage is lowered, while blood chemical tests demonstrate a phosphate content of the blood higher than normal.

In diarrhea we have an example of the excessively rapid excretion of bases. This is probably the most important factor in the severe, and frequently fatal acidosis attending attacks of diarrhea not of the ileocolitis type, in infants. The depletion of bases by the intestine interferes with the elimination of acids. In this disease, however, all of the other methods of acidosis production are illustrated. The many ways in which acidosis is produced, accounts for the severity of the condition. There is no ketonuria, but there is an increase of the lower fatty acids due to deficient metabolism. The kidney, without anatomical lesions, stops functioning, due perhaps to the dehydration from the intestine, and fails to eliminate the phosphates and sulphates. Finally, on account of damage to the intestinal mucosa, and hurried passage of intestinal contents, there is insufficient assimilation of base-containing material from the food.

In the conditions mentioned, we see that the complicating acidosis is more dangerous to the patient than the primary malady. Therefore, if we want to save life and affect cure, the diagnosis and treatment of the acidosis as a condition, is imperative. The following is a list of some of the conditions in which acidosis is found, and the treatment and prognosis of which is materially benefited by attention to the acidosis:

Exanthemata of children.
High continued fever of any variety.
Intestinal infections, slight and severe.
Many other febrile conditions.
Infectious diseases.
Starvation.
Gastro-intestinal diseases.
Eclampsia; toxemias of pregnancy.
Majority of normal pregnancies.
Acute yellow atrophy of the liver.
Phosphorus poisoning.
Uremia.
Narcosis.
Obesity under reduction regime.
Practically all major surgical cases.

There are some clinical phenomena which enable us to recognize the condition after it has developed to a more or less severe degree. One of these is the increased rate and depth of respiration, the cause of which is as follows: fluctuations in the equilibrium between acid and alkaline phosphate and carbonates of the blood do not affect the H-ion concentration of the blood; but this concentration does vary with the interchange between the bicarbonate and free $CO^2$, and increases with the increase of $CO^2$. As the H-ion concentration of the blood must be kept constant to make life possible, an increase will stimulate the respiratory center to increased activity. The H-ion concentration has been termed the hormone of respiration.

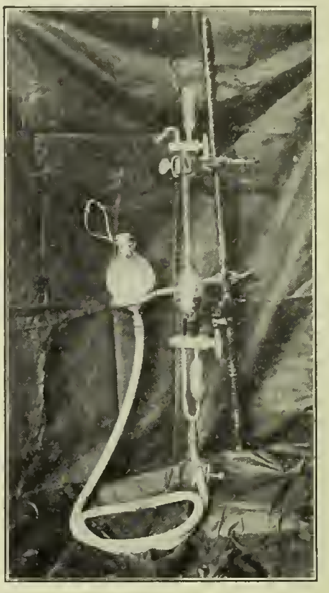
An increased heart-rate, increased blood-pressure, and shortening of the time that a patient is able to hold the breath, are present in acidosis, and valuable as diagnostic signs. However, these things are not noticeable until the acidosis has developed to a severe degree, and long after the maximum good can be accomplished therapeutically. They denote an impending attack on the H-ion concentration. For an accurate diagnosis of this condition early in its onset, accurate laboratory methods are necessary.

Among the older methods are the qualitative recognition of the presence of the ketone bodies in the urine, and the estimation of the ammonia coefficient. The former enables us to recognize only one kind of acidosis, and only after it has become severe. The ammonia coefficient is raised also only after the acidosis has become severe enough to exhaust the carbonates and phosphates from the blood; and is not accurate, as the calcium and magnesium of the urine are also concerned in carrying acid. These methods are not safe guides.

The titration of urinary acidity with phenolphthalein or other indicators is grossly inaccurate as an index of acidosis. In some acidosis conditions there is an increase of acidity of the urine; in others, the acidosis may be severe, with deficient acid elimination in the urine. Certain drug manufacturing houses distribute or sell apparatus and reagents for the titration of urinary acidity as a basis for the administration of their products. The writer wishes to utter a warning against placing reliance on such crude and inaccurate methods.

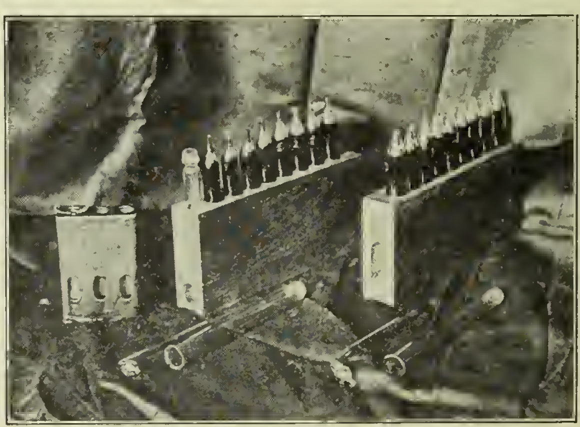
The measure of a patient's alkali tolerance is a rough but reliable test. It gives an approximate idea of the degree of an acidosis after this has once developed, though insufficient to recognize the low degrees of impending acidosis. In a normal person, the administration of about 5 grams of sodium bicarbonate suffices to render the urine alkaline to litmus or phenolphthalein. In a mild acidosis, 20 gm are required; in severe cases, 30 to 40 gm, and in extreme cases, very large quantities are tolerated without causing vomiting or diarrhea, or it may be impossible to neutralize the urine with quantities which the patient's stomach will tolerate.

Of the more accurate methods, the determination of the H-ion concentration is not available clinically, both for the reason that it is too complicated, and for the reason that it is not an index of the excess of fixed acid radicals, an excess of these not affecting the H-ion concentration except to a very slight extent. The estimation of the $CO^2$ reserve capacity of the blood is the most direct method of estimating clinical acidosis. With the increase of fixed acid radicals in the blood, more of the alkali is saturated, and the capacity for transporting $CO^2$ is decreased. Marriot's method of measuring this reserve -$CO^2$-carrying capacity of the blood alkali is to dialyze blood through collodion sacs, add a color indicator to the inorganic dialysate, and compare the color with carbonate solutions of known composition. Van Slyke's method consists in shaking up the blood plasma with $CO^2$, and measuring the quantity that is absorbed by means of a special apparatus. The serum after shaking with $CO^2$ is placed in the apparatus, acidified to set free the $CO^2$, and the evolved gas extracted by exhaustion and its volume read and computed to a percentage of the serum.



Van Slyke apparatus for CO2 reserve of blood plasma.

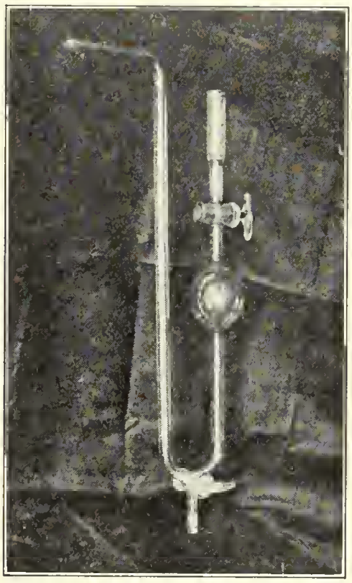
As the tension of the $CO^2$ in the blood and that in the air of the pulmonary alveoli comes to an equilibrium by diffusion through the epithelium, the tension of the $CO^2$ in the alveoli is a measure of that in the blood, and therefore an index of the systemic acidosis. This is true provided the function of the pulmonary epithelium is not disturbed by disease, and under constant conditions of



Marriot's apparatus for alveolar CO2 and plasma reserve.

atmospheric pressure; that is, a given standard holds only at its particular sea-level, but standards may be determined for any sea-level. Marriot's method for determining this tension is to collect the specimen from the patient's lungs in a rubber bag, bubble it through an alkaline solution; and by means of color indicators, to estimate the change in reaction. Fridericia has devised a special apparatus in which the air can be collected, the $CO^2$ absorbed with caustic alkali, and the decrease in volume read in terms of percentage.

There are a few points to be considered in the treatment of acidosis conditions. Alkali is usually given in the form of a solution of sodium bicarbonate, 4 percent for intravenous, and 2 percent for subcutaneous. In subcutaneous use, care must be exercised to see that none of the bicarbonate is changed to carbonate, or severe sloughing will ensue. This is given until the urine becomes alkaline, and sometimes enormous quantities are required. In mild cases, oral or rectal administration suffices; in severe cases, the intravenous is the only effectual method. In cases of diarrhea of very young infants, the injection may be made in the superior longitudinal sinus, or in the femoral or jugular veins. It is good practice in these cases to give alkali without waiting for signs of acidosis, with the idea of preventing its development.



Fridericia apparatus for alveolar CO2.

It should also be remembered that calcium and magnesium bases are required by the body, and should be included in the medication. It is also important that much water should be administered by mouth or rectum; this not only aids in combating acidosis by cooperating with the kidneys, but is beneficial in practically every disease of which acidosis is a complication.

Finally, carbohydrates should be liberally included in the diet, in order to burn up fats completely and avoid the formation of acid intermediaries, and to avoid an excess of fats in the diet. For instance, preparatory to a course of the Allen treatment in diabetes it is well to stop all fats in the diet. Carbohydrates should be given liberally in the diet immediately before, and as soon as possible after a major surgical operation, or during a course of reduction in obesity.

### Bibliography.

Marriott and Howland, Arch. Int. Med. Nov. 15, 1916, p 708.

Gradwohl and Blaivas, Blood and Urine Chemistry, C. V. Mosby & Co., pp 165-193.

Monographic Medicine, Appleton, vol. ii, pages 248-50.

Peabody, Arch. Int. Med., XVI, 6, Dec. 1915, p 893.

Woodyatt, Jour. Am. Med. Assoc. LXVI, 25, June 17, 1913, p 1910.

Editorial, Jour. Am. Med. Assoc., LXVI, 21, May 20, 1916, p 1624.

Marriott, Jour. Am. Med. Assoc., LXVI, 21, May 20, 1916.

Howland and Marriott, Am. Jo. Dis. Chil. May 1916, p 309.

Roth, Jour. Am. Med. Assoc. LXV, 5, July 31, 1915, p 413.

Chapin and Pease, Jour. Am. Med. Assoc. LXVII, 19, Nov. 4, 1916, p 1531.

Marriott, Arch., Int. Med., XVII, June 1916, p 840.

Marriott, Jour. Am. Med. Assoc. 1916, Vol. LXVI, p 1594.

Marriott, Levy and Rowntree, Arch. Int. Med. 1915. Vol. XVI, p 388.

Walker and Frothingham, Arch. Int. Med., XVIII, Sept. 15, 1916, p 304.

Howland, Hessler and Marriott, Jour. Biol. Chem., XXIV, proc. xviii, March 1916, No. 3.

Henderson, N. Y. Med. Jour., Dec. 2, 1916, p 1119.

## Anesthesia and Analgesia in Labor.*

Arthur L. Smith, M. D., Lincoln.

At the present time, due to a much advertised painless labor method, many drugs and anesthetics are being used to lessen the pains due to uterine contractions during confinement. Chloroform and ether have been used for this purpose by the older members of the medical profession, while the newer are using morphine or its derivatives, as narcophin, tocanalgin, heroin, pantopon, scopolamin, hyoscin, bromides, chloral-hydrate, ethyl chlorid, and nitrous-oxid with air or oxygen to the stage of analgesia. Cocain and novocain have been used intraspinally and hypodermically into the perineum and cervix. All combinations of these substances have been tried. Bromides, chloral-hydrate and morphin are usually administered in combination with other drugs.

---

*Read before the Nebraska State Medical Association, Lincoln, May, 1917.

Ether which is still used by a few obstetricians is too slow in action; delays labor, in time, by relaxing uterine muscles; and is usually withheid until the last part of the second stage. It is a kidney irritant, and since pregnancy makes the kidneys particularly sensitive, it seems highly probable that the kidneys are more easily affected by it at this time. It also is the cause of post operative pneumonias, reduces the hemoglobin and the blood pressure and relaxes the muscular tissue; this latter predisposing to postpartum hemorrhage.

Chloroform is still being used by a great number of practitioners, but these do not dare give it early in the labor for fear the patient will demand it throughout. The time of its exhibition is delayed until as late in the second stage as the physician can stand the pleadings of the patient and the demands of the family "to do something." It is said by Saunders (1) to be best for practitioners with no medical assistance, for it can easily be given by laymen; it is quick to act; the patient soon recovers from its effects and does not require much of it; it is easy to administer and pleasant to take, and finally, a parturient woman enjoys an immunity to chloroform. In years of practice Saunders has had no bad results. Brannan (2) of New York City has seen no bad effects in thirty years practice. But Guedel (3) has seen between six and seven obstetrical cases that, due to the effect of chloroform, died within one week from time of administration. He, also, believes that if given to the point of removing consciousness, it will interfere with the power of uterine contractions, and that it tends toward uterine inertia and hemorrhage is concurred in by DeLee (4), Lusk (5), Edgar (6), Davis (7), Skeel (8), Kinnear (9), Danforth (10) and Guedel (3). Graham (11), has shown that it is responsible for many of the hemorrhagic diseases in the offspring and that, due to alkyl halides it is the cause of liver necrosis in the mother. Braun (12) shows the changes in the liver after chloroform anesthesia are the same as those in yellow atrophy. Hodgson (13) reports a death from chloroform poisoning in a healthy woman during labor. Sitting (14) reports five deaths in obstetric cases, which were due to the chloroform. Miller (15) reports "a number of fatalities" from chloroform in obstetrics. The Commission on Anesthesia (16) of the American Medical Association, 1912, concluded that chloroform should be discontinued in major and minor operations. Danforth (17) says "chloroform retards labor and there is always the danger of late chloroform poisoning." For these reasons a safer drug has been sought for producing painless labor.

Pantopon is a mixture of the soluble chlorides of opium and contains 89.77 per cent of all its alkaloids. Jaeger (18) of Kiel in 1910 first used this drug in obstetrics and reports successful results.

Kapp (19) of San Jose, California, in 1914 reported one hundred cases in which he used heroin hydrochlorid hypodermically. The initial dose was one-twelfth grain and afterwards as needed one-twenty-fourth to one-thirty-sixth grain. He reports complete analgesia in these cases.

Tocanalgin is a substance which Paulin (20) reports, obtained by the action of living ferments on opium. He claims Rebemont-Dessaignes had wonderful results with it in producing painless labor. The latter, however, now uses a 3.24 per cent solution of morphin with strychnin and caffein, injecting one cubic centimeter which is equal to one-half grain morphin. He claims that morphin at one per cent arrests labor but at 3.24 per cent does not. This seems rather strange in the face of an overwhelming opposite report.

Reilander (21) in sixty-five cases has given epidural injections of novocain and adrenalin and alypin and adrenalin into the sacral region. This lessened pain very much in two-thirds of the cases and in the other one-third had no effect. Davis (22) uses this method in unusual cases. Gellhorn (23) has also tried it. King (24) of Denver has injected a . 2 per cent novocain solution with adrenalin into the perineum. He reports good results in about one hundred cases.

The morphin-scopolamin method of painless labor was first advocated by Von Steinbuchel in 1902. Kronig and Gauss (25) experimented with this method until they worked out the present so-called Dammerschlaf. This consists in the hypodermic administration of morphin gram one-hundredth or narcophin gram two-one-hundredths and scopolamin .00045 gram when the pains are ten minutes apart. It manifests itself in three-fourths to three hours. The patient is placed in a quiet, sound proof, darkened room; the lights are turned low; no relative in the room; the attendants have noiseless shoes; the mother's ears are stuffed with cotton and eyes covered with opaque glasses. The second dose of scopolamin .00015 to .0003 gram, is given as necessary and repeated as required to keep the patient in a state of forgetfulness. She should not remember things that have been shown shortly before. The morphin or narcophin is not repeated. The scopolamin must be stable and is prepared by their chemist. Narcophin is narcotin-morphin-meconate and is a proprietary drug put on the market by the same organization. They claim that any bad result obtained by those using this method is due to repeated use of morphin or to unstable scopolamin. When the patient is in the proper state, the Babinski reflex is often present and the pupillary dilatation due to pain is often absent. The loss of memory is the most important. There should be apperception but not perception. In the first five hundred cases reported by Gauss (26) there was oligopnea in one hundred nineteen infants, and the heart rate in some of these was decreased to sixty per minute. In 1911 he reported three thousand cases. In these, sixteen percent of the babies were oligopneic and five per cent showed asphyxia. There was amnesia in sixty-three to sixty-five per cent of the mothers. Forceps were used in six to seven per cent. He believes oligopnea is of little consequence. In order that the mother will not "awaken," ethyl chloride is given as the head passes over the perineum. The cord is cut as soon as the child is born and the infant is removed to another room at once, lest the mother be awakened. Kronig (25) says the disadvantage of this method is the restlessness, so on account of its unpleasant impression on the family, no relative is allowed in the room.

In this country the method is practiced by Rongy (27), Kinnear (9), Polak (28), Van Hoosen, Schloessingk (29), Gillmore (30), Heller (31), Brannan (2), Libby (32), Humpstone (33), Miner (34), Harrar and McPherson (35). These physicians report sixty-five to eighty per cent of amnesia. In Germany it has been given by Reining (36), Weingarten (37), Ziffer (38), Pusching (39), and Bertino (40) with varying success. Gauss (41), Schlimpert (42), Lehmann (43), Preller (44), Bass (45), Frigyesi (46) and Kleinertz (47) commend its use, while Hocheisen (48) and Gminder (49) condemn it. Rongy, one of the foremost advocates of this method had the assistance of a physician of four years training under Gauss and Kronig in his first series, and reports amnesia in from sixty-five to seventy-five per cent of the cases. Later Rongy (26) had complete amnesia in seventy-seven per cent of three hundred cases, a great number were restless, six had to be restrained; in fifteen per cent he sutured lacerations of the perineum; seventeen percent were terminated artificially and fifteen per cent of the babies were oligopneic. He used ether in those delivered by artificial means and gave others one cubic centimeter of pituitrin when the head was on the perineum. He says asepsis cannot be rigidly enforced and the second stage is prolonged. Later (50) in a review of two thousand cases, ten per cent required restraint; forceps were used in twenty-six per cent; and of the infants sixteen per cent were oligopneic; three percent asphyxiated; three per cent stillborn; eighteen of which, death was due to the drugs administered. He says, all agree, the second stage is prolonged. He believes patients experience pain. In these cases, chloroform, ether, ethyl chlorid, or somnoform was administered during the stage of expulsion. Rongy (51) and Arluck report they often use pituitrin to hasten delivery. Rongy (52) says that "twilight sleep" and painless labor are not synonymous, for, in a large number of cases pain is not influenced. A large number suffer a great deal of pain and discomfort. There is amnesia in seventy-five per cent of the selected cases.

Reed (53) says that deliveries are not painless, as mothers must have pains long enough to show they are in labor. In his one hundred cases, sixty-three were started with a Vorhees bag; forceps were used in twenty-five per cent; fifty per cent were given chloroform during second stage; in four cases there was violent excitement and labor was prolonged six to seven hours. Price (54) says, in his series a majority of the babies were born in a semi-narcotic state and the restlessness which is very marked near the end of the second stage is minimized by many operators. During this period he now gives chloroform. For the prolongation of labor he gives pituitrin. Beach (55) says restlessness is rather common in the second stage and he gives chloroform, or ethyl chlorid during actual delivery. To overcome the prolongation of the second stage, he employs a tight abdominal binder, flexion of thighs on abdomen, pituitrin and episiotomy. Schloessingk (29), to prevent waking, gives about ten cubic centimeters of ethyl chlorid as the head passes over the perineum. He says there is often oligopnea. Burns (56) gave chloroform during the second stage and used forceps twenty-four times in one hundred cases. Gillmore (30) uses chloroform and Shallenberger (57) ether during the perineal stage. Heller (31) says the second stage is positively delayed and in the babies the cry was delayed five minutes in twenty-nine out of one hundred fifty cases. Brannan (2) reports several cases in which the restraining efforts of several nurses were necessary. He says the physician should be present from the time of administration until delivery is completed. Polak (58) believes the progress of labor must be carefully watched by repeated rectal and abdominal examinations, the fetal heart must be auscultated every half hour and if arrhythmia, slowing or acceleration develops, the drug should be discontinued and the fetus delivered immediately. He says fifteen per cent of the infants have oligopnea for several minutes and believes that morphin and scopolamin are both dangerous. He (59) uses it only in selected cases, and declares that one to be successful, must have a rational conception of the degree of amnesia to be obtained; a trained operator must be present during the entire confinement and the proper hospital environment must be provided. He believes there is no danger to the mother, but to the child there is the danger of the prolongation of the second stage and the interference with placental circulation. He says, "We have practically discontinued the method and substituted nitrous oxid-oxygen or chloroform for the second stage." Polak and Mathews (60) agree that scopolamin and morphin are distinctly first stage drugs. Libby (32), in forty-two cases, reports the prolongation of labor in multiparae one hour, and in primiparae, two to three hours. Six of his babies were asphyxiated. Humpstone (33) says the perineal stage is lengthened and he gives chloroform during this stage. The difficulties are the maintenance of asepsis; necessity of numerous rectal examinations; lack of use of voluntary muscles, and oligopnea in the infant. "It is so delicate and exacting a procedure that it is likely to be little employed outside the hospital." Harrar and McPherson (35) in one hundred cases found no difference between narcophin and morphin. They used ether or chloroform as the head emerged. Under disquieting surroundings, scopolamin produces excitement. They selected only one-fourth of all obstetric cases which entered the hospital and twenty-four of those selected, did not respond to treatment. Miner (34) has used "twilight sleep" twenty times in homes and she reports remarkable results. Knipe (61) says a community hospital should be established for general practitioners; a specially trained physician can administer the drugs and call them when patients are ready for delivery. Haultain and Swift (62) in England used hyoscin and morphin in forty cases and reported thirty-five per cent forceps; chloroform in nine cases; four babies required artificial respiration; and one baby's death was due to the method. Van Hoosen (so I am told by a Chicago physician) has a heavy canvas harness to hold the patient, so that asepsis may be preserved. The above is a synopsis of the reports of those using "Dammerschlaff."

Now let us hear, briefly from those to whom it does not appeal. DeLee (4) in 1913 in Freiburg saw ten cases with "asphyxia and narcosis of the children; prolongation of labor, hours often, and days sometimes; arrest of revolution of the head; restless delirium, even violence; disturbance of the heart and lungs; difficulty in preserving the asepsis of the delivery, postpartum hemorrhage and uncertain results." "In the clinics of Heidelberg, Berlin, Dresden, Munich and Vienna, the Freiburg method has been tried and discarded." Rudolph Holmes (63) who has used this method, reports "have seen babies die from 'twilight sleep' have seen many so deeply narcotized that they aroused the gravest anxiety for many hours." Webster (64) says a large number of damage suits have been filed against prominent physicians in Germany on account of alleged ill effects due to "twilight sleep." Frank (65) reports that infrequently it requires the united efforts of several nurses and the obstetrician to hold down in her bed the struggling patient whom, it is true, cannot later recall these scenes. Herb (66) believes that morphin and scopolamin depress kidney function, which is a dangerous condition in these already overladened organs. Baer (67) reports seventy cases of "twilight sleep" in Michael Reese Hospital. They surrounded their cases with all the precautions that could be devised by Frankenthal and Cary. Two nurses, two internes and Dr. Baer were present throughout every case and they had practically every complication possible in the use of the method. The hospital will not allow it to be given now except in case the patient guarantees there will be no liability on account of bad results. Reed (68) admits he has had the same number of cases of delirium as reported by Baer. Fleurent (69) abandoned it after three cases in which the heart action became bad and he extracted the fetus under chloroform anesthesia. Davis (20) says: "The recent experiences of other observers indicate that great mental excitement and temporary insanity may follow." Cragin (70) surrounded Shloessnigk at the Sloane Maternity with every possible assistance, yet the results were deplorable and the method had to be abandoned. Broadhead (71) has abandoned the method. Jacobi (72) says that every minute of asphyxia is fraught with danger to the later cerebral development. One of the first American women to undergo this method in Freiburg, sacrificed her life in the next confinement in Brooklyn. It was a placenta previa, the child and placenta were delivered, when an uncontrolable hemorrhage followed. Was the hemorrhage due to relaxed tissue from morphin and scopolamin? The attending physician was one of the best obstetricians and one of the strongest advocates of "twilight sleep" in this country.

To summarize:

1. Twilight sleep is not suitable in over one-half cases applying for it.

The first five hundred cases reported by Gauss were selected from seven hundred and thirty-one cases. He was successful in only three hundred and eighty-one.

2. The patient complains of pain and reacts to it.
3. Must have quiet, dark room, patient's ears must be stopped with cotton and eyes covered with opaque glasses.
4. Must have stable drugs, manufactured in Freiburg.
5. No friends allowed in the room.
6. Trained operator must be present during whole confinement and he must have sufficient assistance to restrain patient if necessary.
7. Must be done in a hospital.
8. Restlessness may often be present in mother.
9. The labor is prolonged; artificial interference is often necessary.
10. The child may be oligopneic, apneic, or asphyxiated, and its heart action may be slowed to thirty per minute.
11. Its advocates report amnesia in sixty to eighty per cent of selected cases.
12. It is especially indicated in long first stage labors.
13. Many of the users of morphin and scopolamin agree it is a first stage drug and that some anesthetic should be given during the second stage.

Since none of the above methods were considered safe to mother or child, Webster (64), Lynch (73), Heaney (74), and Guedel (3) experimented with nitrous oxid analgesia and all have after a very extensive experience given it their unqualified endorsement. Lynch (73) says that in consequence of the fetal and maternal danger, the use of ether and chloroform has become gradually restricted to the latter part of the second stage, leaving the woman to endure the rest of labor the best she can. Nitrous oxid and oxygen may be started in any stage of labor, with no danger to mother or child, and may be given in the home or hospital. The second stage is not prolonged but often shortened. Babies cry immediately. Heaney (74) says the frequency of pains is not decreased and their strength is increased; fetal heart tones are not disturbed and nitrous oxid-oxygen is free from all valid objections to other methods of securing painless labor. Davis (75) says it does not lengthen labor but shortens it on account of assistance from the mother. He has relieved every case and believes there is no danger to mother or child. Guedel (3) says he has given all kinds of anesthetics in labor and prefers nitrous oxid analgesia. In ninety per cent of his cases it has been self-administered with perfect success. DeLee (4) says that nitrous oxid is excellent in most cases. Skeel (8) gives morphin in first painful stage or chloral hydrate when this is contraindicated. Nitrous oxid-oxygen is begun when the cervix is dilated. This method has been successful in every case. Danforth (10) gives morphin in first stage if necessary and nitrous oxid-oxygen as soon as pains are severe enough. He uses a dental nose piece and after four to eight breaths the patient breathes through her mouth. He increases the analgesia to anesthesia as the head passes over the perineum. Webster (64) believes that gas has no ill effects on mother or child and uterine contractions are not decreased in strength no matter how long it is administered. Edgar (6) says "as an intermittent analgesic and anesthetic, the nitrous oxid-oxygen mixture is well adapted to the second stage." It is superior to all others in second stage on account of its oxytocic action. Chase (76) has been successful in the use of this gas mixture and considers it safe for mother and child. Davis (77) has tabulated the results in parallel cases of confinements. The one series with nitrous oxid and the other without analgesia. He finds that labor was shortened about twenty-five percent by the use of nitrous oxid-oxygen; the stay in the hospital averaged one and one-half days less; the babies lost less body weight; the number and severity of lacerations were reduced; the percentage of operative cases was not increased and there was no case of post partum hemorrhage. The babies all cried immediately after delivery. This series was carried on without any idea of publication. Holmes (63), Nicholson (78), Brodhead (71), Cherry (79), Grosvenor (80), Heidrink (81), Findley (82), Hyde (83), Hoag (84) and McCullough (85) have used it successfully and consider it free from all danger to mother and child. In an alternating series of cases Allen (86), in the Brooklyn Cumberland Street Hospital has shown that women under morphin scopolamin are in labor longer and do not feel as well afterwards as mothers who have had nitrous oxid-oxygen analgesia. He has abandoned the former method in favor of the latter. Brodhead (71) has discontinued morphin-scopolamin and reports favorably on nitrous oxid-oxygen. He has had about one hundred morphin-scopolamin deliveries and says patients become too excited and at times it takes several nurses to restrain them. It also takes too much time as the obstetrician must be present throughout the labor. Cragin (70) says that they desired to give the morphin-scopolamin method a thorough trial at the Sloane Hospital, so invited Dr. Schloessnigk, who had been for four years on the staff of Koenig and Gauss, to demonstrate the method. They seemed to have about all the complications that are liable to happen in the practice of obstetrics. This, notwithstanding the fact the doctor was surrounded with every facility requested. The method was abandoned and nitrous oxid-oxygen analyesia has been substituted with entire satisfaction.

Neither in a review of all the obtainable literature nor in two hundred answers received from letters sent to obstetricians all over the country, have I yet found one physician to express dissatisfaction with the results obtained in the employment of nitrous oxid-oxygen analgesia, to lessen the pangs of labor. I have been able to collect two thousand two hundred eighty-seven cases (and besides many have not given the number of their cases) in which this method has been employed, and the reports show that the results in mother and child have been excellent; there have been no bad effects; labor is usually shortened; it is absolutely without danger; and can be used in the home as well as in the hospital.

Woodyatt (87) shows the safety of nitrous oxid-oxygen in anesthesia. Dogs were sensitized to toxins by the removal of their liver glycogen. No dog thus phloridizinated survived ten minutes of chloroform anesthesia. All treated with ether showed some tissue changes, yet only trivial changes were found to follow two hours anesthesia with nitrous oxid-oxygen given in this weakened condition. However, the analgesia method does not deal with deep anesthesia so if only slight changes follow two hours deep anesthesia, how little danger could there be in a few hours analgesia where the volume of gas is often one-twentieth of that given during anesthesia. Hamburger and Ewing (88) have compared nitrous oxid, ether and chloroform from the standpoint of changes in the blood. They conclude that nitrous oxid has no permanent effect of any significance; that ether causes more harmful changes (slight anemia and lengthens the time of coagulation); and that chloroform causes the most harmful results (hemolysis and production of distinct anemia). Casto (89) says that in a bibliographic review and by personal experiments he has found that the hemoglobin is markedly reduced by chloroform and ether, and only slightly under nitrous oxid anesthesia. Hemolysis is caused by ether and chloroform. McKesson (90) shows the blood pressure is reduced under ether and chloroform and remains the same with nitrous oxid anesthesia.

As to the relative danger of the different anesthetics and narcotics, Miller (15) states:

Chloroform 392 deaths in 1,034,025 anesthesias, 1 in 2,665.

Scopolamin 59 deaths in 38,499 anesthesias, 1 in 666.

Nitrous Oxid 1 death in 100,000 administrations.

H. C. Woods, Jr. (91), gives the death rate in morphin-scopolamin narcosis as one in one hundred fifty. Keen (92) in 262,000 ether anesthetics reports thirty-four or one in eight thousand ten. Buchanan (93) says the death rate in nitrous oxid administrations is one in 5,250,000. Teter (94) has collected reports of 1,161,820 nitrous oxid anesthesia with two deaths. From the foregoing therefore, it seems nitrous oxid-oxygen is the safest anesthetic, ether next, then chloroform and that morphin-scopolamin is the most dangerous substance of the four.

I have administered nitrous oxid-oxygen in forty-four obstetric cases, and with the exception of the first four cases, have had perfect results. Morphin grain one-fourth was given to the first three mothers confined and resuscitation of the infants required from twenty-five minutes to one hour and ten minutes. In one of these the cord, being around the neck and one leg, may have been the cause of the asphyxia. In the fourth case the nitrous oxid was not given over five minutes, so the mother received little analgesic effect. In an eclamptic mother, a version and extraction was performed, while in two others, forceps were applied, one for a persistent occiput posterior and the other due to a rigid perineum. In the last on account of exhaustion of the oxygen tank, ether was administered during traction with the forceps. The longest time of administration in this series was six hours and twenty minutes; the shortest five minutes.

The gas outfit used was the folding Baby Clark with a nose and mouth piece. The method of administration with some variations, is as follows:

Let the mother breath air through the mouth piece until she knows what to do.

Give her a few whiffs of the gas so she can learn it is not disagreeable.

Find the number of breaths (this may vary from three to eight) necessary to produce analgesia.

Place the hand over the uterus and the beginning uterine contraction can be detected before the mother becomes conscious of it.

The required number of breaths of nitrous oxid are inhaled at the beginning of the contraction.

Oxygen is added if there is any trace of anoxemia.

During the second stage, the mother is told to "bear down."

This is continued until the stage of expulsion, when nitrous oxid and oxygen are given to the stage of continuous, deep analgesia.

If sutures are to be taken in the perineum, the patient is kept in deep analgesia.

The placenta is delivered under intermittent analgesia.

The gas can be started at any time and as far as I can see can be given any length of time. I usually start it when the mother thinks it is necessary.

The advantages of this method are:

It is easy to give and pleasant to take.

It may be started, during any stage of labor and discontinued instantly at any time.

It can be given any length of time.

It is devoid of danger to mother or child.

After the first few breaths the patient loses her fear of the pains and co-operates heartily.

It is best in highly nervous primiparae.

Mother is not exhausted after labor.

Mother is never unconscious.

It shortens labor, as much as twenty-five percent.

There is nothing complicated about its administration and the technique can soon be learned.

It can be given in the home as well as in the hospital.

In the review of all the available literature, it is shown that morphin (and its derivatives) and scopolamin are first stage drugs; ether and chloroform are used only in the latter part of the second stage; and nitrous oxid-oxygen, which is the least dangerous, can be given in all stages. Therefore, it seems to me the nitrous oxid-oxygen method of producing painless labor, while not ideal, is the best we have at the present time.

I want to thank my colleague Dr. John Mills Mayhew for his helpful assistance and valuable suggestions, and Miss Clara Marguerite McMahon for her assistance in collecting the literature pertaining to this subject.

1. Saunders, Charles A.: Va. M. Semi-M., April 21, 1916, pp 40-42.
2. Brannan, John W.: Med. Rec., May 1, 1915, pp 715-717.
3. Guedel, Arthur E.: J. Indiana M. A., March 15, 1915, pp 113-119.
4. DeLee, J. B.: Practice of Obstetrics, 1916, p 302.
5. Lusk, G.: Painless Childbirth, p 18.
6. Edgar, J. Clifton: J. A. M. A., September 2, 1916, pp 739-741.
7. Davis, Carl Henry: J. A. M. A., September 18, 1915, p 993.
8. Skeel, A. J.: J. A. M. A., March 11, 1916, pp 797-800.
9. Kinnear, J. A.: Dominion Med. M., October, 1916, p 55.
10. Danforth, W. C.: Surg., Gyn., Obst., March, 1916, pp 354-356.
11. Graham, E. A.: Am. Yr. Bk. of Anesthesia and Analgesia, 1915, pp 136-151.
12. Braun: Centr. f. d. Gren. d. Med. u. Chir., September 8, 1917, pp 1-3.
13. Hodgson: Atlantic J. Rec. of Med., November, 1911.
14. Sitting: J. A. M. A., February 1, 1908.

15. Miller, Albert H.: Am. Yr. Bk. of Anesthesia and Analgesia, 1915, pp 107-115.

16. Committee on Anesthesia of A. M. A., Am. Yr. Bk. of Anesthesia and Analgesia, 1915, p 107.

17. Danforth, W. C.: Personal Communication.

18. Jaeger: Pantopon, Am. Yr. Bk. of Anesthesia and Analgesia, 1915, p 248.

19. Kapp, Michael W.: Heroin, Am. Yr. Bk. of Anesthesia and Analgesia, 1915, p 249.

20. Paulin: Tocanalgine, Am. Yr. Bk. of Anesthesia and Analgesia, 1915, p 249.

21. Reilander: Zentralbl f. Gynak., 1910, No. 13.

22. Davis, Ed. P.: Am. J. M. Sc., January, 1915, p 57.

23. Gellhorn: Surg., Gyn., Obst., October, 1914.

24. King, R. W.: Surg., Gyn., Obst., November, 1916.

25. Kronig, Geheimrath, Prof. Dr.; Surg., Gyn., Obst., May 1914.

26. Gauss: Arch. f. Gynak., 1906, Band 58, Heft 3.

27. Rongy, A. J.: N. Y. State J. M., September, 1915.

28. Polak, J. O.: N. Y. Med. J. February 13, 1915.

29. Schloessingk, K. E.: Med. Rec., April 10, 1915.

30. Gillmore, R. T.: N. Y. Med. J., August 7, 1915.

31. Heller, Jacob: Med. Rec., November 7, 1914.

32. Libby, W. E.: J. A. M. A., September 18, 1915, p 996.

33. Humpstone, O. P.: L. I. Med. J., December, 1914.

34. Miner, Elizabeth: Woman's Med. J., May, 1916.

35. Harrar and McPherson: Am. J. Obst., October, 1914.

36. Reining: Zentralblatt fur Gynakologie, 1904, 47.

37. Weingarten: Inaug. Dissert., Giessen, 1904.

38. Ziffer: Monatsschrift fur Geburts, u Gyn., 1905, Bd. XXI.

39. Pusching: Wiener Klin, Wochensch., 1905, 16.

40. Bertino: La Ginecologia, Rivista practica, Vol. IV, pp 609-23.

41. Gauss: Medizin, Klinik, 1906, No. 6, Munchener Med. Wochenschrift, 1907, No. 4.

42. Schlimpert: Inaug-Dissert., Freiburg, 1906.

43. Lehmann: Zeitschrift fur Geb. u. Gyn., Bd. LVIII, 1906.

44. Preller: Munchner Med. Wochensch., 1907, No. 4.

45. Bass: Munchner Med. Wochensch., 1907, No. XI.

46. Frigyesi: Abhandlungen aus dem Gebriete der Geb. und Gyn., Berlin, 1909, Bd. 1, Heft 2.

47. Kleinertz: Zentralblatt fur Gyn., 1908, No. 42.

48. Hocheisen: Munchner Med. Wochensch., 1906, No. 37.

49. Gminder: Hegars Beitrage zur Geb. u. Gyn., 1908, Bd. XII, Heft 3.

50. Rongy, A. J.: Am. J. Surg., February, 1916.

51. Rongy and Arluck: N. Y. Med. J., September 16, 1916.

52. Rongy, A. J.: Am. J. Obst., October, 1914.

53. Reed, Charles B.: Surg. Gyn., Obst., June, 1916.

54. Price, Nathaniel G.: J. M. S., New Jersey, January, 1915.

55. Beach, Ralph M.: Am. J. Obst., May, 1915.

56. Burns, T. Mitchell: Northwest Med., April, 1916.

57. Shallenberger, W. F.: Atlanta J. Rec. Med., June, 1915, pp 107-116.

58. Polak, J. O.: L. I. Med. J., December, 1914.

59. Polak, J. O.: J. A. M. A., September 18, 1915.

60. Polak and Mathews: Am. Yr. Bk. of Anesthesia and Analgesia, 1915, pp 246-250.

61. Knipe, Wm. H. Wellington: Am. J. Obst., December, 1914, pp 884-910.

62. Haultain and Swift: Brit. Med. J., October 14, 1916.

63. Holmes, Rudolph: Am. J. Obst., May, 1915.

64. Webster, J. Clarence: J. A. M. A., March 6, 1915.

65. Frank, Robt. T.: Am. J. Surg., September, 1915, p 351.

66. Herb, I. C.: J. A. M. A., April, 1915, p 262.

67. Baer: J. A. M. A., April, 1915, p 263.

68. Reed, Charles B.: J. A. M. A., April, 1915, p 263.

69. Fleurent: Zeitsch. f. Geburts u. Gynak, 1913, Bd. 74, Heft 1.

70. Cragin, E. B.: Post-Graduate, February, 1915, p 98.

71. Brodhead, George L.: Post-Graduate, February, 1915, pp 87-96.

72. Wall, Joseph S.: J. A. M. A., January 22, 1916.

73. Lynch, Frank W.: Ill. Med. J., April, 1915.

74. Heany, N. Sproat: Surg., Gyn., Obst., September, 1915, pp 387-389.

75. Davis, Carl Henry: J. A. M. A., September 18, 1915, pp 992-994.

76. Chase, Peter R.: Providential Med. J., July, 1916, pp 195-201.

77. Davis, Carl Henry: Painless Childbirth.

78. Nicholson, Wm. R.: The Therapeutic Gazette, June 15, 1916.

79. Cherry: Personal Communication.

80. Grosvenor: Personal Communication.

81. Heidbrink, J. A.: The Lennox, December, 1916.

82. Findley, Palmer: The Medical Herald, July, 1916.

83. Hyde, John: Personal Communication.

84. Hoag, Carl L.: Surg., Gyn., Obst., November, 1916.

85. McCullough: J. A. M. A., March 6, 1915, p 812.

86. Allen, Herbert C.: N. A. Jour. of Hom., 1914, XXIX, November.

87. Woodyatt, R. T.: Tr. Soc. Exper. Biol. and Med., March, 1914.

88. Hamburger and Ewing: J. A. M. A., 1907, p 1586.

89. Casto, Theodore D.: Am. Yr. Bk. of Anesthesia and Analgesia, 1915, p 50.

90. McKesson, E. I.: Am. Yr. Bk. of Anesthesia and Analgesia, 1915, p 93.

91. Woods, H. C., Jr.: Am. Yr. Bk. of Anesthesia and Analgesia, 1915, p 114.

92. Keen, W. H.: Boston Med. and Surg., Jour., December 2, 1915.

93. Buchanan: Amer. Jr. of Obstetrics, N. Y., 1915, LXXI, p 630.

94. Teter, C. K.: J. A. M. A., November 23, 1912, p 1845.

### Discussion.

**Dr. Inez Philbrick, Lincoln.**—I think the doctor's paper is extremely important. He always gives us that kind of a paper. It seems to me that at this time it is especially important that we decide what the safe anesthetic is, not only in obstetrics, but in minor and major surgery, and that the profession stand for that safe anesthetic, which I think is ether. I do not know what Dr. Smith may say, but from my reading of the Journals through the year, and special reports of Dr. Baldwin of Columbus, I am convinced that nitrous oxide is not nearly so safe as ether. In an experience of a good many years I have found ether the most satisfactory anaesthetic if one learns how to use it; and I have become fully convinced that the danger is not with the ether. I have never seen a failure of kidney function following the administration of ether. I have never seen an ether pneumonia. I heard one of our leading surgeons here in Lincoln the other day may the same statement.

As to the use of chloroform, I think it will soon be regarded a crime on the part of any member of the medical profession to use chloroform in obstetrics or in surgery. We have had in Lincoln during the last month cause to have this fact impressed upon us. In the days when I used chloroform, I had occasionally excessive flow following labor. I had few, very few, post partum hemorrhages; and those which I had were due to the use of chloroform, I am convinced. In the last 15 or 18 years since I have abandoned its use, I have had no post partum hemorrhages.

As for Twilight Sleep, while I do not doubt that it is adapted to the occasional case, I feel that the profession has a duty to perform in informing the pregnant woman that it is only applicable in a few cases of difficult dilation in the first stage of labor in primiparae. It certainly is inadvisable in the second stage to use anything that will retard muscular contraction. As you all know, a hot sitz bath will go a long way towards relieving the first stage. We who practice obstetrics know that the ordinary woman is not able to pay the fee which would be required by the attendance of her physician continuously for twenty-four hours. It is impossible for the ordinary family to meet that expense and it is absolutely unnecessary. I want to say in closing that experience, after all, is the thing; and those of us who are getting gray haired and who have sat longest by the bedside of obstetrical cases are chary about adopting some of the newer methods.

**Dr. C. P. Fall, Beatrice.**—I would like to call your attention to the fact that in the process of labor the second stage is accomplished almost entirely by the abdominal muscles. After the first stage of labor is ended, the second stage of labor is accomplished by the expelling force of the abdominal muscles. Civilization with its advancement has brought about the use of the corset pressure, atrophy; has produced a weakening of the abdominal muscles and that is the reason why we have this paper read before us today. What has become of the old German lady who used to get up in the morning and prepare the breakfast, lie down and have her baby and get up and prepare dinner? She wore no corsets. Now, let us tell our women to take their corsets off, especially when they know they are pregnant, wear looser corsets when they are not pregnant and you will have not nearly so much use for these anaesthetics that you are talking about.

**Dr. H. H. Waite, Lincoln.**—I would like to make one or two observations. Suppose a man were capable of bearing a child with all of the pain necessary to such a process. Is there a single one present who would not take a safe anaesthetic? For surgical operations which require anaesthesia for a considerable period of time chloroform is about ten times as dangerous as ether according to statistics. For prolonged anaesthesia ether is very much safer than chloroform. In obstetrical work where the amount of chloroform given is not large and the anaesthesia not very deep there is little danger from its use.

**Dr. C. H. Breuer, Lincoln.**—The writer has given us a very valuable paper, and he has mentioned different methods, but he did not mention the H. M. C. (hyoscine-morphine-cactin), a purely American method, which has been in use for the last fifteen years and even though now used by over 40,000 physicians in this country yet is not much talked about. This is the original method, from which the so called "twilight sleep" has been imitated. It is different from twilight sleep, in that the combination morphine and scopolamin is used to produce the narcosis. Scopolamin is really a mixture of hyoscine, atroscine and apoatropine and is never the same, and this very likely explains, why the propounders of the so called twilight sleep insist on so much special care, as they are never sure of the results. The H. M. C. method is simple and can be used in any home, on any farm without any special assistants, without any special fuss and the attending physicians are perfectly able to do all that is necessary themselves and they do it every day. It requires no special training and any physician who is capable of using morphine, atropine and similar alkaloids hypodermically ought to be qualified to use H. M. C. I have used it for the last fifteen years under all circumstances and in hundreds of cases and never have seen any untoward symptoms. It consists simply of injecting either a full strength or half strength tablet hypodermically and that is all there is to it.

**Dr. Olga Stastny, Omaha.**—I would not say that a woman must necessarily be in a hospital to be delivered of a child by the scopolamin-morphin method of anaesthesia.

There are differences in hospitals, also in homes—and I can say that I have successfully delivered women in the home by this method.

As to laying so much stress on the dark room and cotton in ears, etc., it is not necessary—though in ordinary cases quiet and avoiding excitement of the patient is conducive to better action of your drug. Almost any physician after giving a dose of morphine to allay pain from whatsoever cause, advises quiet for the same reason. Patients under scopolamin morphine are especially susceptible to external stimuli, and reflex actions not being abolished, leaving her unrestrained as much as possible is the best procedure.

In successful twilight sleep during which patient quietly sleeps during the first state, she begins to throw herself about the bed, moan, sit up, etc., as second stage approaches, but quietly sleeps between pains. It is here that harm is done by restraining her, and here that the bag used by Dr. Van Hoosen in her clinic is most valuable.

It is not as stated in the paper under discussion "a harness." It is made of heavy canvass enveloping the entire bed—reaching three feet above the level of the springs and held by firm steel frame so that the patient is, as it were, enclosed in a canvas cage, during her period of restlessness.

She cannot harm herself in any way, need not be restrained, and only the minimum amount of stimulus puts reflex actions also at the minimum. The bag is not needed during the last stages as the mother invariably settles down at that period and uses her abdominal muscles for expulsion just as any woman in labor without anasthesia. Too many form an opinion of this method after seeing two or three cases, and not thoroughly studying it, condemn it.

**Dr. I. C. Munger, Cozad.**—I wish to express my appreciation of this paper. All the treatment and methods advocated have only been applicable to hospital practice or at least in well appointed city homes with trained assistants at hand. But I would like to ask what per cent of the babies are or can be born under these conditions? What about the mothers in the rural districts? They do not seem to have come in for consideration. I grant you that it is entirely unsafe for us in the country to attempt to carry out, unaided, the methods advocated for complete anesthesia or amnesia as carried out in a well equipped lying-in hospital. Must we doctors doing obstetrics in the country, because we do not have hospitals for our patients, allow the women to suffer all the agonies of child birth? I believe the time is past, it ought to be at least, when a physician should be allowed to sit idly by and allow a woman to fight it out alone. There is much we can do for these women by using a modified treatment and it has been my practice for a number of years on seeing these patients to observe them for a few minutes and then examine them to determine, as far as possible, the progress of labor and if I think the patient is not going to be delivered for an hour or an hour and a half I administer from an eighth to a sixth of a grain of morphine with 1/200 or 1/150 gr. of hyoscine. I prefer to give it earlier if possible. The last dose should not be given closer than one hour to delivery. If given sufficiently early I repeat the hyoscine often enough to just hold the patient in the desired state of amnesia. During the second stage as delivery is approaching, I supplement the treatment with just sufficient ether to hold my patient in the desired condition. If I have not seen her sufficiently early to administer the morphine and hyoscine I always administer sufficient ether to give the patient reasonable relief from her suffering. There is no reason because of living in the country that women must be deprived of something to help them through their labors.

## Conserve Ammonia—Use of Natural Ice.

One of the best opportunities of conserving ammonia is made available by the substitution of natural ice for the manufactured product. This substitution is being provided for throughout the country, and it is expected that a very large percentage of the ice used next summer will be ice that the food administration is encouraging people to harvest now from rivers and ponds wherever possible.

A serious obstruction in the way of this splendid opportunity of providing an urgently needed chemical for our army and navy is caused by the fact that several large cities have restrictions against the use of natural ice.

It is obvious that municipalities should not permit the use of polluted ice. There is much misapprehension and prejudice concerning the use of natural ice that careful consideration and study will dispel. To any Boards of Health, etc., interested in this subject, the food administration will be glad to send any of the following booklets (published by Natural Ice Association of America, 18 East 41st St., New York City):

Status of Scientific Opinion of the Purity of Natural Ice.

The Effect of Handling and Storage on the Safety and Purity of Ice.

Non-Relation of Natural Ice to Typhoid Fever and Dysentery.

The Purity of Natural Ice.

The Bacteriology of Ice.

The Sanitary-Chemical and Bacteriological Examination of Natural Ice.

Melted Natural Ice Compared with Bottled Spring Water for Drinking.

The Study of the Purity of Natural Ice from Polluted Water.

Melted Natural Ice vs. Bottled Spring or Distilled Water for Drinking.

Bacteria in Natural Ice.

Natural Ice and the Public Health.

Factors of Sanitary Safety in a Natural Ice Supply.

Water from Melted Natural Ice for Domestic Use.

# THE NEBRASKA STATE MEDICAL JOURNAL

Published monthly by The Nebraska State Medical Association.

Irving S. Cutter, Editor..........Omaha
A. F. Tyler, Associate Editor..........Omaha
J. M. Aikin, Business Manager..........Omaha
Room 468 Brandeis Building.

Publication Board.

F. A. Long, Chairman..........Madison
W. O. Bridges..........Omaha
B. F. Bailey..........Lincoln
J. M. Aikin, Ex-Officio..........Omaha

Subscription $2.00 Per Year. Single Copies 20c Each

Address all communications to J. M. Aikin Business Manager, 468 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

**Vol. III. January, 1918. No. 1**

## Program Committee for 1918 Meeting.

The Program Committee for our Semi-Centennial State Association meeting in May, 1918, held one meeting and adjourned to convene on February 15, 1918, to complete the program for printing in the March issue of our Official Journal.

B. W. Christie,
Fred W. Buckley,
Clyde Roeder,
John S. Welch,
Joseph M. Aikin, Chairman

## The Income Tax.

Due to the operation of the federal income tax law which was passed by the last congress, it is quite important that physicians understand the interpretation of the law at this time.

The law of 1916 gave a married man an exemption of $4,000 and he was required to pay a 2% tax on the net income above that amount. The law of 1917 placed an additional war tax upon all net incomes above $2,000 in cases of married men. In addition to this, there is an excess war profits tax against professional men consisting of 8% on all net incomes above $6,000. For example, if a physician had a net income of $7,000, it would be figured as follows:

| | |
|---|---|
| Tax $3000 at 2%...... | $ 60 |
| Tax $5000 at 2%...... | 100 |
| War Profits Tax<br>$1000 at 8%...... | 80 |
| | $240 |

giving a total tax to be paid of $240. The new ruling makes it mandatory upon every person receiving $1000 net income to report to the federal income tax collector. If one does not report the punishment is one year in the federal prison and a fine double the amount of the tax which should have been paid. Furthermore, it is incumbent upon all employers of labor to furnish the names and addresses of employees receiving a salary of more than $1000. There is no escape from

## Officers and Delegates of County Societies (so far returned) for 1918.

| County— | President— | Secretary-Treasurer— | Delegate— |
|---|---|---|---|
| Adams | W. S. Fast | C. R. Spicer | J. B. McPherson |
| Boyd | J. P. Beatty | R. C. Hawkins | E. B. Bradley |
| Custer | F. A. McGrew | C. L. Mullins | G. I. Sellon |
| Clay | J. E. Ingram | J. W. Archerd | H. H. Seeley |
| Fillmore | J. Bixby | V. V. Smrha | N. H. Blakeley |
| Hall | David H. Carson | Andrew J. Baker | L. Phelan |
| Holt | | J. P. Gilligan | |
| Johnson | A. B. Cramb | Truman E. Fairall | C. D. Barnes |
| Madison | A. N. Howley | E. L. Brush | |
| Phelps | J. L. McGill | P. A. Sundbury | E. I. Whitehead |
| Pierce | W. S. Dinsmore | F. H. Nye | W. T. Craft |
| Platte | F. E. Lemar | A. G. Lueschen | W. S. Evans |
| Saunders | F. W. McCaw | M. A. Quincy | Frank Tornholm |
| Scottsbluff | C. N. Moore | W. P. Hodnett | F. B. Young |
| Seward | J. J. Morrow | H. J. Wertman | C. C. Hickman |
| Thayer | A. Herney | O. R. Platt | |
| Washington | James B. Anderson | G. A. Langstaff | Morris Nielsen |
| Webster | A. Z. Ambrose | H. S. Reed—I. A. Pace | E. A. Creighton |
| York | G. P. Shidler | B. S. Root | |

the above ruling and although we feel that the present income tax law is unfair to professional men because of the fact that the income is figured at a certain percentage on the money invested in equipment, allowing nothing for the cost of securing the ability which is requisite for the practice of law or medicine.

The only way to handle the question is to face the music, pay our proportion of the war expense gladly and later perhaps the law will be modified so as to be more fair to professional men.

### NEBRASKA NEWS.

Dr. A. A. Ward of Gothenburg has located in Peru.

Dr. A. D. Dunn of Omaha spent the holidays in Chicago.

Dr. S. N. Hoyt of Omaha is recovering from a severe illness.

Dr. F. A. Bates of Geneva was injured recently when his car turned over.

Mrs. William Glover of Aurora has offered her home to be used as a hospital.

Dr. F. W. Plehn of Scottsbluff, Nebraska, has installed a complete X-ray equipment.

Dr. A. Sachs of Omaha has returned from a course of post-graduate work in New York City.

Dr. Dare Woodruff of Grand Island has returned to McCook where he will resume his practice.

Dr. Floyd S. Clark of Omaha was recently appointed to the staff of St. Joseph Hospital as Pediatrician.

Dr. Edwin C. Henry, Omaha surgeon, was operated on recently for appendicitis. Dr. Henry is convalescing.

Dr. F. P. Murphy who was compelled to report to Camp Funston under the draft law, has been transferred to the Medical Reserve Corps.

A training school for nurses has been opened by St. Joseph's Hospital in Omaha. Miss Mary McMahon of St. Louis is in charge of the work.

Dr. L. J. Cook has been appointed as physician to Swift & Company, south side, Omaha, vice Dr. Hench resigned to enter the medical service of the United States Army.

Dr. Joseph Antony of Omaha who has been at the Kansas City school for instruction in military roentgenology for some time, has been assigned to active duty at Fort Riley.

Dr. J. M. Bannister, Col. U. S. A., recently received word that his eldest son who has been serving with the Canadian regiment on the western front in Europe, is reported missing.

The Lincoln Journal of December 30th published a number of short news items from Dr. H. W. Orr of Lincoln, at present serving as American Volunteer Surgeon in a British hospital.

Dr. E. S. Tenny, health commissioner of the State Board of Health, tendered his resignation to Governor Neville and has accepted a commission as major in the Medical Officers Reserve Corps.

Dr. LeRoy Crummer has recently returned from a trip to Washington, D. C., relative to details in the organization of the University of Nebraska Red Cross Base Hospital Unit No. 49.

Dr. Harry L. Aikin, Major Medical Reserve Corps, stationed at Rockford, Illinois, spent Christmas with his parents in Omaha. While here he gave a short talk before the Omaha Rotary Club on medical service in the army.

Dr. Andrew Sinamark of Fremont was home for a short visit before leaving for his new post. Dr. Sinamark has been in the United States Naval School at San Francisco and has been appointed to the marine hospital on the island of Guam.

Dr. Frank M. Conlin of Omaha gave a very interesting talk to the members of the Omaha Rotary Club recently describing the physical examination given to applicants for service in the aviation section of the United States Army.

Drs. Edward and Hugo Chaloupka of the south side, Omaha, are mourning the loss of their father who died December 24th at the age of 79. A strange coincidence is that an uncle living in the same town died on the same day of the same cause.

Dr. B. A. Finkle for five years connected with a state institution at Fairbault, Minnesota, has been appointed first assistant physician of the Norfolk State Hospital to succeed Dr. Harry R. Carson who recently left Norfolk to join the medical corps of the army.

Dr. A. D. Dunn of Omaha and Dr. H. H. Waite of Lincoln were paid their fees when it was decided by the supreme court that their contract with the county attorney of Dixon to appear and give expert medical testimony in the William Flege murder case was enforcible.

Omaha nurses held a meeting on December 17th and the special committee appointed to investigate the salaries of nurses elsewhere reported increases in various other states and recommended an increase to $30 per week be made here. The high cost of living and the war are responsible for the increase. Formal action on the matter will be taken by the nurses' registry board in the near future.

Dr. L. B. Pilsbury of Lincoln has been appointed by the board of control as superintendent of the Lincoln asylum to succeed Dr. B. F. Williams who has resigned. Dr. Pilsbury takes charge January 1. Dr. Pilsbury has been in the employ of the state at the Lincoln hospital for over ten years, being appointed pathologist in 1906 by Governor Mickey. In 1912 he was made assistant superintendent.

A training school for nurses will be opened by the sisters of St. Elizabeth hospital at Lincoln about January 1st. The regular course of study outlined by the Nebraska state board of nurses will be given by the sisters and the attending staff of the hospital. Three full years of study and practical work will be required. A class room and also a recreation and study room have been equipped at the hospital.

The Western Surgical Association held its twenty-ninth annual meeting in Omaha December 12th and 13th. This association is composed of one hundred and fifty surgeons, from the eastern line of Ohio to the Pacific coast. The membership is limited to one hundred fifty. Omaha surgeons who are affiliated with the association are: Dr. A. F. Jonas, Dr. J. P. Lord, Dr. A. C. Stokes, Dr. J. E. Summers and Dr. B. B. Davis.

A conference of the Medical Women's League of Nebraska was held in Lincoln, December 8th. It was decided by the league to cooperate with the American Women's Hospital in assembling and preparing a unit for war work. The following from out of the city were present: Drs. Minerva Newbecker, Ord; Nina R. Smith, Homer; Sadie C. Doran, Falls City; Ruth Warner, North Platte; Ada Platz, Beatrice; Emma Demaree, Roca.

Red Cross Base Hospital 49 of the University of Nebraska has appealed to the Nebraska State Red Cross organization for $25,000, to be used in purchasing equipment not supplied by the government. The cost of equipment for this base hospital unit will be approximately $150,000. The original quota of nurses has been increased from 65 to 100 and the hospital director, Dr. A. C. Stokes, has been notified that the organization must care for at least one thousand beds.

The state board of control is having difficulty in securing physicians for positions in hospitals for the insane and other state institutions. Several physicians have left the service of the state to enter the army and others will soon leave. The board of control has transferred Dr. Lawrence W. Sidwell, first physician at the hospital for insane at Hastings, to the same position in the Lincoln hospital for the insane. Dr. Sidwell had ten years' experience in the Iowa institute for feeble minded at Glenwood, Iowa.

It is hoped that the Surgeon General's Office will find it expedient to locate one of the Government Reconstruction Hospitals in Omaha or vicinity. A strong presentation of the advantages of Omaha as a site for such a hospital has been made to the Surgeon General's office through the Commercial Club of that city. The possibility of a strong consulting staff would render the location of a hospital in Omaha of the greatest advantage. The attitude of the government seems to be that wounded and convalescent soldiers should be returned from France as rapidly as consistent with the welfare of the patient.

## NOTES.

Lieut. L. E. Hanisch, M. R. C., has sent out "At Home" cards indicating Buffalo, N. Y., as the temporary residence of the doctor and his wife.

Dr. P. H. Salter, reported in the December issue of the Journal as commissioned with the rank of Captain, should have been reported commissioned as Major.

Dr. Harvey Mettlen of Bloomfield has been commissioned in the Medical Reserve Corps. The name of Dr. Mettlen should be added to the Nebraska Roll of Honor.

The Council on Medical Education of the A. M. A. will hold a joint meeting with the Association of American Medical Colleges in Chicago, Feb. 4th and 5th, 1918.

The Nebraska-Iowa Pediatric Society met Tuesday, January 15, at the University Club, Omaha. Dr. Morgulis read a paper on "Fasting and Its Relation to Pediatrics."

Surgeon General Rupert Blue of the U. S. Public Health Service has asked congress to appropriate $300,000 for the purpose of establishing a Sanitary Reserve Corps, to combat outbreaks of disease in both times of war and times of peace.

Dr. Theodore C. Janeway, since 1914, Professor of Medicine at Johns Hopkins University and previously Bard Professor of Medicine at Columbia, died of pneumonia December 26 at his home in Baltimore. Since the declaration of war Dr. Janeway has been as a major in the M. O. R. C. engaged in perfecting the organization of internists in the base hospitals of the army.

## COUNTY SOCIETY NOTES.

Forty-two members of the Omaha Douglas County Medical Society have already joined the colors. The society is paying the dues of these absent members in the State Association during their absence so that when they return they will be active members of the State Medical Society.

The Omaha Douglas County Medical Society held their annual election of officers following a banquet at the Loyal Hotel, Tuesday, December 11th. The officers chosen were: President, A. F. Tyler; vice president, W. P. Wherry; secretary-treasurer, Roy A. Dodge. The report of the society for the past year showed a membership of 274 and that there were not more than a dozen eligible physicians in the county who are not members of the organization.

The Madison and Stanton County Medical Society met at Tilden December 4th. Tuberculosis was the subject discussed. Among those present were Drs. E. L. Brush and C. R. Mullong of Norfolk. The next meeting will be held at Meadow Grove on January 4th.

The Saline County Medical Society held its annual meeting in Crete December 17th. Dr. A. A. Conrad of Crete was unanimously elected to membership in the society. The following officers were elected.

Dr. Truman I. Wigim, Dorchester, president.
Dr. W. M. Elliott, Crete, vice president.
Dr. H. W. Quirk, Crete, secretary-treasurer.
Dr. William H. Pallett, Crete, censor.
Dr. F. J. Stejskal, Crete, delegate to state society.

The following were present: Drs. Warder, Farwell and Hamilton of Friend; Drs. Pallett, Stejskal, Byrnes, Conrad, Elliott and Quirk of Crete.

At a meeting of the Thayer County Medical society, held in Hebron December 6th the following officers were elected:

Dr. Adam Herney of Deshler, president.

Dr. Harry H. Stretton of Chester, vice president.

Dr. Platt of Hebron, secretary.

Dr. Harvey W. Saylor of Bruning and Dr. Wilcox of Hubbell, censors.

The Dodge County Medical Association held its annual meeting in Fremont December 11th. A special committee was appointed to make an investigation relative to location and prices of land for an isolation hospital where patients suffering from infectious disease could be cared for.

The election of officers resulted as follows:

Dr. S. A. Preston, Fremont, president.

Dr. Grant Reeder, Fremont, vice president.

Dr. Charlotte Seiver, Fremont, secretary-treasurer.

Dr. H. N. Morrow, Fremont, censor for three years.

Dr. R. T. Van Metre, delegate to state association.

Drs. R. J. Murdock, M. Nielsen and Killian of Blair were visitors.

The annual meeting of the Fifth Councilor District of the Nebraska State Medical Association met in Blair, October 24, 1917. Dr. R. C. Byers of Nickerson presided.

The following papers were presented and discussed:

"Mucous Colitis," Dr. S. A. Swenson, discussed by Dr. Lukens of Tekamah.

"History of Cases in Manilla," Dr. J. M. Banister.

"Some Surgical Aspects of Gastric and Duodenal Ulcer," Dr. G. H. Rathburn, Fremont. Discussed by Dr. Michael J. Ford, Omaha.

"Localized Appendiceal Abscess," Dr. W. H. Prunner, Omaha.

"Intestinal Obstruction," Dr. C. A. Roeder, Omaha. Discussed by Drs. Rathburn, Benson and Ford.

"Acute Anterior Poliomyelitis," Dr. J. C. Agee, Fremont. Discussed by Drs. Rathburn, Inches, Aikin and Benson.

Dr. Overgaard of Omaha showed lantern slides of conditions often encountered in common fractures.

A banquet followed the program with Dr. J. M. Aikin of Omaha as toastmaster.

The Gage County Medical Society held its regular meeting in Beatrice where they were entertained by Superintendent D. G. Griffiths of the Institute for Feeble Minded. Papers were read by Dr. C. P. Fall of Beatrice and Dr. C. C. Gafford of Wymore. The following officers were elected:

President—Dr. I. N. Pickett of Odell.

Vice President—Dr. C. C. Gafford of Wymore.

Secretary-Treasurer—Dr. H. R. Brown of Beatrice.

A meeting of the Republican Valley Medical Association was held in Minden, October 18th. Drs. C. L. Fahnstock and J. K. Muldoon being absent Dr. C. O. Rich presided. Papers were presented by Drs. J. N. Campbell, C. O. Rich of Omaha, A. A. Smith and J. Larson.

A resolution to turn over $50.00 to the Red Cross was adopted.

The following officers were elected:

President—Dr. S. R. Hopkins, Hastings.

Vice President—Dr. W. D. Shields, Holdrege.

Secretary-Treasurer—Dr. L. W. Rork, Oxford.

Red Cloud was selected as the next meeting place.

L. W. Rork, Secy.

## Mid-Winter Meeting

### Elkhorn Valley Medical Society.

Fremont, January 10, 1918.

10 O'clock a. m.

Symposium—Cancer: The Early Recognition.

1. Breast, J. Stanley Welch, M. D., Lincoln.
2. Castro-Intestinal, Chas. H. Newell, M. D., Omaha.
3. Uterus, Palmer Findley, M. D., Omaha.
4. Roentgen Ray in Malignancy: Cases Suitable, Histological, Action, Results to be Expected, Albert F. Tyler, M. D., Omaha.

12 O'clock Luncheon, Hotel Pathfinder.

1 O'clock p. m.

1. Relation of the Red Cross to the Present War Activities, Major Arthur C. Stokes, M. D., Omaha.
2. Significance of Ocular Inflammation, Jas. M. Patton, M. D., Omaha.
3. Empyema in Children, Howard B. Hamilton, M. D., Omaha.
4. New Growths in the Lung. (Report of a Case). Andrew Harvey, M. D., Fremont.
5. Some observation in Abortion, Albert E. Buchanan, M. D., Fremont.
6. Tuberculous Meningitis, Frank M. Conlin, M. D., Omaha.

---

## MILITARY NOTES.

Dr. W. C. Becker of Papillion has joined the medical corps of the army and has reported at Camp Funston.

Dr. Charles E. Palmer of David City has enlisted in the medical reserve corps and is at Fort Riley, Kansas.

Dr. Delbert Hibberd of Kearney has been transferred to the medical corps at the encampment in New Mexico.

Dr. G. A. DeMay of Indianola and his brother Dr. G. H. DeMay of Wilsonville have enlisted in the medical reserve corps.

Dr. L. Stark of Hartington who was given a commission as first lieutenant in the medical officers reserve corps and assigned to duty with provisional field hospital No. 1 at Fort Riley has been made commanding officer of Field Hospital No. 38.

Doctors Faught, Plehn and Boyd of Scottsbluff and Brown of Gering have been appointed as the medical examining board of their county. The medical men were asked to organize as a board and take the federal oath as promptly as possible in order that the work of examination of registrants may not be retarded.

The Medical Advisory Board appointed by President Wilson for Phelps county was organized December 19th. Following are the members: Dr. Sanders, president of the board; Dr. J. L. Magill, secretary; Dr. W. D. Shields, treasurer. This board will reexamine all drafted men who are appealing from the physical examination given by the local board.

---

## MARRIAGES.

The engagement of Dr. Carroll D. Evans, Jr., of Columbus and Miss Margaret McHenry of Denison, Iowa, was announced.

# THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, OMAHA, MAY 7, 8, 9, 1918

Vol. III. Norfolk, Nebraska, February, 1918. No. 2

## CONTENTS.

Page
Acidosis in Children, Floyd Clarke, M. D., Omaha ... 37
Empyema in Children, Howard B. Hamilton, M. D., Omaha ... 41
The Diagnostic Value of Cerebrospinal Fluid Examination, M. G. Wohl, M. D., Omaha ... 43
Present Status of Streptococcus Differentiation, W. C. Becker, M. D., Papillion ... 47
Presentation and Their Diagnosis, J. N. Campbell, M. D., Stamford ... 50
Empyema of Nasal Accessory Sinuses, H. B. Lemere, M. D., Omaha ... 53
Editorial ... 54
Observations Upon Caesarean Section. Charles C. Allison, M. D., Omaha ... 58
Case Reports—
  Report of Intracranial Growths, H. B. Lemere, M. D., Omaha ... 59
  Dyspituitarism, Olga Stastny, M. D., Omaha ... 60
Page
A Case Report of Acute Cerebro-Spinal-Syphilis, Geo. W. Covey, M. D., Lincoln 61
Tuberculous Appendix, Max Emmert, M. D., Omaha ... 62
Tuberculous Meningitis, Frank M. Conlin, M. D., Omaha ... 62
Interlobar Empyema With Spontaneous Rupture, LeRoy Crummer, M. D., Omaha 63
Colon Bacillus Abscess of the Liver, E. C. Henry, M. D., Omaha ... 64
Book Reviews ... 64
Society Notes ... 68
County Society Notes ... 68
Notes ... 69
Military Notes ... 69
Recommended for Commissions ... 70
Necrology ... 70
Abstracts ... 70
Communications ... 72

## Acidosis in Children.*

Floyd Clarke, M. D., Omaha.

Acidosis may be defined as a diminution in the reserve supply of the fixed bases in the blood and other tissues of the body. Normally, acids are formed in the body as a result of the combustion of carbon, phosphorus and sulphur. In health, the carbon is oxidized in the tissues and the resulting carbon dioxide is carried as carbonate, largely sodium bicarbonate, by the venous blood to the lungs. Here the sodium bicarbonate breaks up—the carbon dioxide is exhaled, and the normal carbonate returns by the arterial blood to the tissues where it is ready to again take on more carbon dioxide. If there now occurs a diminution in the carbonates, the blood is unable to carry sufficient carbon dioxide, and its accumulation in the tissues takes place. With the accumulation of carbon dioxide in the tissues, the oxygen carried by the red blood is unable to be utilized, and is carried in the veins. This gives the venous blood a red color, and probably accounts for the lack of cyanosis when the condition acidosis is present.

The term acidosis is really not definite. Too frequently, acidosis simply means the presence of acetone bodies in the urine, and does not differentiate between almost their normal presence and their being present in sufficient amount to endanger life.

The normal alkaline reaction of the blood is maintained by (a) sodium bicarbonate occurring in the blood, (b) phosphates of sodium and potassium found in the red cells, (c) proteins. Carbon dioxide and the salts of sodium are present in the blood in such proportion as to maintain a nearly neutral or slightly alkaline reaction. If acids are added to the blood, they combine with sodium and potassium, liberating carbonic acid and phosphoric acid. These two acids being weak acids, produce a minimal change in the reaction of the blood. This fact alone is important in protecting the body against acidosis. The body also possesses the ability to rather quickly eliminate these weak acids, carbon dioxide being eliminated by the lungs, and phosphoric acid, as acid phosphate, by the kidneys. Henderson calls these substances the "buffer substances," because of their ability to limit chemical changes, when acids or alkalis are added to the body. If acids are continuously introduced, they will finally overcome these buffers, also reduce the alkali reserve of the blood, and acidosis results. Still further protection is maintained, because of the presence in the blood of a weak solution of sodium bicarbonate. Weak solutions are able chemically, to take on large quantities of carbonic acid, without appreciable change in reaction. For this reason, the blood is able to eliminate considerable amount of carbon dioxide without changing reaction.

---

*Read before Nebraska-Iowa Pediatric Society, December, 1917.

Proteins are amphoteric. They possess the power to combine with appreciable amounts of either acids or alkalis, without undergoing a change of reaction themselves. Because of this ability, they assist in protecting the body against the onslaughts of acidosis. When acidosis is present, there is usually an increased ammonia excretion. Ammonia will neutralize a certain amount of acids. The increased ammonia does not encroach upon the alkalis of the body, being formed from urea, a neutral substance.

The methods used for testing acidosis are, (1) direct examination of the blood, (2) examination of the urine, (3) estimation of carbon dioxide tension of alveolar air. Van Slyke has perfected a method of examining the blood for its carbon dioxide content. It has the disadvantage of requiring a rather complicated apparatus, and the services of an expert laboratory man.

Sellards describes a test of the blood which is based on the fact, that normal blood serum reacts as an acid to phenolphthalein, but if heated reacts alkaline. The test is described as follows: one c.c. of blood serum is shaken thoroughly with 25 c.c. of absolute alcohol, and the alcohol filtered off. The filtrate with a few drops of phenolphthalein is evaporated to dryness. With normal human serum, the residue is always red. In mild grades of acidosis, the residue is either colorless, or on close observation, one may detect just a trace of pink color, but an intense red color develops on adding a few drops of water. In more marked grades of acidosis, the residue is colorless, and remains colorless on adding water.

Howland and Marriott have done considerable work on the estimation of the carbon dioxide tension in the alveolar air. Carbon dioxide tension in the blood and in the alveolar air normally remains the same. This tension is diminished in acidosis, and is explained as follows: as more acid is produced in metabolism, or retained in the body, it appropriates more of the reserve alkali of the blood, thereby diminishing the available supply to combine with the carbon dioxide to form sodium bicarbonate. This reduction of the bicarbonate content of the blood, causing a greater acidity, will stimulate the respiratory center to more energetic action. This will lead to increased ventilation of the lungs with the result, that the carbon dioxide tension in the alveoli will drop. This diminution of the alveolar carbon dioxide tension is, therefore, indicative of a state of acidosis.

Examination of the urine for acetone, diacetic acid, and B-oxybutyric acid has long been regarded as a definite test for determining the presence or absence of mild or severe grades of acidosis. These substances are present in the urine as a result of a carbo hydrate disturbance only, and their presence does not necessarily mean a depletion of the fixed bases of the body. Sellards advocates the estimation of the tolerance to sodium bicarbonate as the most accurate and delicate test for acidosis. This tolerance can be estimated by determining the alkalinity of the blood, or by estimating the change in reaction of the urine after giving sodium bicarbonate either intravenously or by mouth. Normally, the urine should change from acid to alkali after taking 3 to 5 grams of sodium bicarbonate. If considerable amounts of alkali are necessary to make the urine alkaline, acidosis is probably present.

### Etiology.

We must realize that acidosis is not a distinct disease, but really only an expression of some underlying condition, or disturbed process in metabolism. Until more is known of the metabolism of all the foods, probably the real cause will not be apparent. We must also bear in mind, that there is more or less interdependence in the proper metabolism of all the foods. Particularly is this true in the metabolism of the carbo-hydrates and fats. If for some reason, the carbo-hydrates are improperly taken care of, the fats do not go on to proper combustion.

Abt believes that acidosis results from incomplete fat and protein metabolism, due to functional or organic disease of the liver, or to carbo-hydrate starvation. Fischler and Kosson, in a series of experiments, have recently shown that acetone, diacetic acid and B-oxybutyric acid are mainly formed in the liver. Archibald Smith, in a recent article, also believes that the rats are responsible for the acetone bodies, with the proteins occupying a secondary role, and states that the acetone bodies are probably excreted as a result of a lessened oxidation of fat, brought about either indirectly by a lessened sugar combustion, or by a direct influence of some unknown nature in fat metabolism. Charles Hunter Dunn believes that acidosis is due to toxic products of an error in metabolism. He does not pretend to state the nature of these toxic products. His belief is that the essential disturbance, is one of carbohydrate metabolism, and that the frequency and severity of acidosis in children is partly due to the various toxemias to which children are particularly prone, i. e., intestinal toxemias diseased tonsils and adenoids, chronic appendicitis, etc. He places considerable stress on the nervous disturbances of children, such as those occasioned by excitement or fatigue, thus giving rise, or being accompanied by a toxemia, which may in turn create a disturbance in metabolism.

### Pathology.

In well marked and severe cases, there occurs fatty infiltration of the liver. Free fat is found in the blood. Kidneys show fatty degeneration.

### Predisposing Causes.

Both sexes are alike effected. The condition is rather more frequent in private practice, and occurs most often in the well fed, robust type of child. The children are apt to be nervous, high strung type. Some cases show a stationary weight for some period before onset. Frequently, there is a history of prolonged over-eating, and a tendency to constipation. An attack may be brought about by any unusual excitement, such as a children's party, a railroad journey, or other unusual disturbance. In one of our own cases, the attack was induced by witnessing an Ak-Sar-Ben parade.

### Symptoms.

There are two separate and distinct clinical types. One is known as recurrent, cyclic or periodic vomiting. The other type, we will call acid intoxication. The literature on this phase of the condition usually speaks of this type as acidosis. In order to avoid confusion, acid intoxication is probably the better term.

### Recurrent Vomiting.

The essential symptom is vomiting. It is sudden in onset, and characterized by being excessive and prolonged. The child vomits first the contents of the stomach, later mucus, and occasionally this may be blood-streaked. If food, water or medicines are administered, they are almost immediately vomited. Usually a sweetish odor is apparent on the breath. There is no fever, and most frequently constipation is present. The urine is scant, acid in reaction, and acetone, diacetic acid, and possibly B-oxybutyric acid are present. There is no impairment of the mentality. After the first twenty-four hours, the child looks extremely ill. The eyes are sunken, and a variable degree of prostration is present. There is usually a slight leucocytosis of 9 to 12000. Usually the attacks last from two to four days, recurring again at intervals. Subsequent attacks may take place without regard to any known cause or disturbance. The attacks seemingly become further apart, as the child grows older. Convalescence is abrupt, and is established soon after the vomiting ceases.

### Acid Intoxication.

The symptoms at the onset are similar to those of recurrent vomiting. The prostration, however, is more profound, and frequently will appear within six to eight hours after the onset. The temperature is apt to be elevated, 102 or 103 degrees. After a variable time, the vomiting ceases, the patient retains water or food for a longer interval. The patient's condition, however, does not improve. There is present drowsiness and apathy, occasionally there are convulsions. With the drowsiness, there is noted an increase in the respirations. Usually the lips are red, cyanosis being present in a minority of cases. In the mild cases, the prostration and drowsiness are not so marked, and the little one can be roused. In the severe type, the prostration is extremely apparent; coma soon supervenes. The respirations are very rapid, and the pulse becomes weak. Temperature at the last may reach 105 to 106 degrees.

### Diagnosis.

This condition may be confused with appendicitis, intussusception, or tuberculous meningitis.

### Prognosis.

In recurrent vomiting, the prognosis is good. The principal danger is occasioned by vomiting of blood. Chas. Hunter Dunn, in his new book, cites two fatalities which were due to this occurrence. The prognosis is not so favorable in so called acid intoxication. In young infants, these cases are often fatal. If there is much impairment of the mental powers, and the respirations are much increased, the prognosis is often unfavorable.

### Prophylaxis.

Can attacks of recurrent vomiting and acidosis be prevented? If the primary cause of acidosis were due to an error in the metabolism of carbon, it would seem by limiting the supply fats and carbo-hydrates, the condition could be in some measure prevented. Unfortunately, this does not work out practically. Probably the most important prophylactic measure to be instituted, is to avoid over feeding.

This is particularly true of recurrent vomiting. Children who have attacks of recurrent vomiting are frequently fed irregularly. Their habit is to "piece" between meals. At the meal time, their tastes are pampered, and they are urged to stuff themselves. All excitement and fatigue should be avoided. Occasionally, attacks of recurrent vomiting can be avoided, by taking the child from the mother, and surrounding the little one with a different environment and attendants.

### Treatment.

Attacks of recurrent vomiting are self limited. Unless food or medicines are given, the attacks will take care of themselves, and vomiting will be lessened. To avoid thirst, and supply fluid to the body, rectal injections of 5% to 10% solution of sodium bicarbonate, in a 5% to 10% solution of dextrose can be given. Six or eight ounces of this solution can be given twice daily. To avoid rectal irritation, it is probably better to administer the lesser solution of dextrose. If extreme thirst is complained of, normal saline can also be given per rectum, between times of injections of dextrose solution. If dextrose is unobtainable, a solution of glucose in the same strength will answer. After the vomiting has ceased for several hours, food should be given cautiously. The first food given should be broths, thin gruels, and equal parts of iced skimmed milk and lime water in small quantities. The diet between attacks, should consist of meat, vegetables, skimmed milk, cereals and stale bread. Prophylactic doses of from one-half to one dram of sodium bicarbonate, sufficient to keep the urine alkaline is to be recommended in the interim treatment.

When symptoms of acid intoxication are manifested, the treatment becomes much more active. An initial free catharsis is especially essential. This can probably best be secured by a saline cathartic. Sodium bicarbonate should be given in large doses, from ten to thirty grains, every two hours. Occasionally, it will be found better retained, if given in dry form. If not retained by mouth, it may be given by rectum, and a 5% solution of dextrose in barley water given by mouth. Experience has shown that if soda is given by mouth, it is wise not to administer it also by rectum. Give sodium or dextrose by mouth, or by rectum, but do not give either by mouth and rectum at the same time. If it is not retained, a 4% solution of sodium bicarbonate can be given either intravenously or subcutaneously. If given subcutaneously, it must be prepared as follows: sterilize a 4% solution of sodium carbonate. This is transformed to the bicarbonate, by passing carbon dioxide from a Kip generator or cylinder through the cold solution till it is colorless to phenolphthalein. This may be used without danger of sloughing or irritation. Solutions of bicarbonate of soda cannot be sterilized without decomposing. If given intravenously, from sixty to ninety grains may be given, in four to eight ounces of water. Hypodermatic stimulation with camphor, digitalis or strychnine may be required. Normal saline may be given subcutaneously as a stimulant.

Abt of Chicago reports five cases with one recovery. Treatment of this case, consisted in giving 8% glucose solution by bowel, together with large doses of sodium bicarbonate by mouth. He also gave powdered casein in one-half dram doses in oatmeal gruel every two hours; soy bean soup, three times daily; whiskey or sour wine in one-half dram doses every two hours; oxygen inhalations when required for dyspnoea.

Gettler and Lindeman, in a series of experiments, increased the alkalinity of the blood by administering twenty grams of sodium bicarbonate every two hours. The greatest increase in alkalinity was found to be 74% and occurred about forty minutes after the fourth dose. They report a very decided recovery in a woman with extreme acidosis. The donors blood was first alkalanized in the manner described, and forty minutes after the fourth dose, 1100 c.c. of blood together with 300 c.c. of Locke's modification of Ringer's solution was transfused. The prompt recovery of the patient was remarkable.

### Test B-oxybutyric Acid.

20 c.c. water, 2 drops acetic acid, to 20 c.c. urine. Boil gently till volume decreased to 10 c.c. add sufficient water till volume is brought back to 20 c.c. Divide fluid into two test tubes. Add 1 c.c. hydrogen peroxide to one test tube, warm gently for one minute and allow to cool. Then add to each test tube 7 drops glacial acetic acid, and 3 or 4 drops freshly prepared solution sodium nitro prusside. Add 2 c.c. concentrated ammonium hydroxide gently down side of each tube, so as to make layer over urine. At end of four hours, compare tubes. If B-oxybutyric acid is present, the tube to which hydrogen peroxide was added will show purple-red ring at junction of ammonia and urine. The other tube no reaction, or only a faint brown if considerable creatinin was present.

### Rothera's Test.

For both acetone and diacetic acid.

10 c.c. urine, add excess ammonia sulphate crystals to saturation. To this, add few drops of freshly prepared solution sodium nitro prusside, followed by 2 or 3 c.c. of concentrated ammonia. Mix thoroughly, and allow to stand thirty minutes. If positive, permanganate like color develops above layer of undissolved crystals.

### References.

Reference Handbook of Medical Sciences, Vol. 1, 1917.
Archives of Internal Medicine, Vol. 18, p 717.
Bulletin Johns Hopkins Hospital, Vol. 27, p 63.
American Journal Medical Sciences, Vol. 153, p 81, Vol. 147, p 86.
Archives of Pediatrics, Vol. 34, p 483.
Practitioner, Vol. 98, p 477.
Florida Medical Journal, Vol. 3, No. 1.
American Journal Diseases of Children, Vol. 13, p 209.
Journal American Medical Ass'n., Vol. 68, p 594.
American Medicine, June, 1916.
Diseases of Children, Holt, 1917.
Pediatrics, Chas. Hunter Dunn, 1917.
Acidosis, Principle and Clinical Methods for Its Study, Sellards, 1917.

---

## Empyema in Children.*

Howard B. Hamilton, M. D., Omaha.

This paper is not intended to consider fully the subject of empyema in children in all of its aspects, but rather to emphasize some of its well known manifestations, and to call attention to some of its less well recognized phenomena. Probably all of us have seen cases of empyemata in which the diagnosis was so long delayed that the child succumbed, or a late operation resulted in a discharging sinus for a prolonged period, and a deformed chest with a compressed and largely nonfunctioning lung. It must be admitted at the outset that empyema is a serious condition. That even with an early diagnosis and free drainage the mortality under six months is almost 100%; that under one year the mortality is certainly over 50%. After this age the prognosis gradually improves but is influenced very materially by the condition of the child when properly treated, the type of infection causing the condition, and the treatment. A pneumococcus infection and an early diagnosis and treatment in a child not in a poor condition is rather favorable, the same conditions with a staphylococcus infection, slightly less so. A streptococcus, mixed as tuberculous infection under any circumstances is grave. That the diagnosis is not easy is attested by the fact that so many are overlooked for a longer period of time than is consistent with good treatment. A continued fever following pneumonia should be looked upon with the suspicion that everything is not all right. With this suspicion it is the duty of the physician to summon all the aids in diagnosis at his command including a thoughtful survey of the history, and symptoms, a careful and repeated physical examination, the X-ray and aspiration. If in doubt, aspirate.

### Bacteriology.

There is no doubt that the pleura of the young child is especially predisposed toward a pneumococcus infection. Dunn reports the pneumococcus present either alone or associated with other organisms, in about 80%

---

*Read before Elkhorn Valley Medical Association, Fremont, January, 1918.

of cases of empyema in infancy. Holt reports the pneumococcus as present in 72% of 180 cases.

Streptococcus, staphylococcus, the tubercle and influenza bacilli account for the remaining about 25% of cases. This showing is in marked contrast to that found in adult life where only about one-fourth of the cases are associated with the pneumococcus. This would account for the fact that a larger number of empyemas complicate lobar than bronchopneumonia in children.

In a general way the physical signs of empyema are too well known to warrant their recital here, but there are certain differences between the conditions in the infant or child, and the adult which it may be permissable to emphasize. The thinness and elasticity of the chest wall, the smallness of the chest, the close proximity of large hollow or salid organs, the inability of the infant to cooperate, add enormously to the difficulties of diagnosis. Furthermore it is said that in children the fluid, even when small or moderate in amount, does not, as in the adult, tend to collect at the bottom of the pleural cavity, floating the lung upward, but tends to spread through the whole pleural space in a layer which varies in thickness with the quantity of fluid. Only the apex of the pleural cavity is free when the quantity of fluid is small, and when it is moderate, all parts of the lung are surrounded. When the quantity of fluid is large, the lung is not pushed upward, but is compressed from all directions toward the hilus. The later statement the writer has not had opportunity of verifying but has observed in a case in which there was a large amount of fluid that the area of greatest dullness was apical. Then again in young children "the proportion of alveolar air space to bronchial air space is much less than in adults." This anatomical difference accounts for normal puerile breathing in children and explains why exaggerated compensatory respiration is so frequently mistaken for bronchial. Medical students and some times doctors, from the symptoms correctly diagnose a pneumonia, and from the physical findings incorrectly locate it on the wrong side. In the physical examination percussion probably furnishes more information than any other method. Both mediate and immediate percussion should be used. The writer has a strong preference for the immediate method in detecting the finer distinctions in resonance and also in determining with greater accuracy the "sense of resistence." It is to be remembered that in percussion the plexor strikes the apex of a cone whose base is widened and deepened in proportion to the force of the blow. Hence, light percussion is essential if our findings are not modified by either solid or hollow adjacent organs to such an extent that our conclusions are worthless.

### Inter Lobar or Para-Pneumonic Empyema.

Gerhardt reports five cases of parapneumonic empyema in adults.

Sauer reports two in children both of which recovered without operation. In these cases the fluid is small in quantity, perhaps a few gtts. or one or two cc. No germs may be found or those which are present are avirulent. If the latter conditions are present, operative treatment is unnecessary. The writer some months ago saw a child two years of age who had, been seriously ill for two weeks with a high temperature, a high leucocytic count and prostration but not disturbed pulse respiration ratio.

Aural, abdominal and urinary examinations were negative. The chest findings were not conclusive until a small spot of marked dullness was found. Aspiration was made at this point and about one-half dram of creamy pus withdrawn. At the operation the following day no pus was discovered, no consolidation of adjacent lung was palpaple, nor were bacteria found in the aspirated pus. The inter-lobar pleurae were adherent. There was but little drainage. A prompt recovery resulted.

Case No. 1.—I was called on October 14, 1917, to a home in which there were three children all of whom were sick. The most prominent symptom in the oldest, aged five, was earache, and the usual evidence of some infection. Two days later the child still having fever, earache and a bulging drum I incised the membrane under light anesthesia. Complete recovery followed in a few days.

The second child, aged three, had in addition to the usual evidence of some infection, a slight tonsilitis, an erythematous, urticarial rash about one knee. She recovered in two or three days.

The third child, aged eighteen months, in addition to the usual evidence of some infection had a generalized, purtaform, erythematous rash which resembled scarletina but had no associated angina. This rash disappeared in two or three days to be followed by a generalized macula popular one with marked tendency to urticarial wheals on the lower extremities. Neither was accompanied by marked coryza, Koplik's spots, or angina, nor did desquamation follow. She did quite well for two or three weeks when she developed suddenly a cervical adenitis. When softening was well advanced the gland was opened under light ether anesthesia and firmly packed with gauze. Two days later she had hematuria and now is apparently recovered from a hemorrhagic nephritis.

One week after the first call to this family the mother was delivered of a new baby without anesthesia or any vaginal examination. Twelve hours later she had a temperature of 104. Forty-eight hours later her nurse went home with a severe attack of tonsilitis. The father who was home a few hours from a distant part of the state reported that he had the "grip" on his return to work.

The baby cried well after birth and the nurse had special instructions to see that it cried lustily two or three times daily. It breathed quite well, nursed pretty well and was not cyanotic until the fourth day when the nurse reported that it was not breathing well and was not a good color. Its temperature at this time was slightly less than 101 per rectum and at no time had it been more than this. On my arrival I found it cyanotic, dyspnoeic, and with difficulty could be made to cry. The skin and umbilicus appeared normal. The respiratory movements were confined to the left side almost entirely. At the base postoriorly of the right lung there was marked dullness and practically entire absence of breath sounds.

The left side so far as the writer was able to judge was normal. Five hours later there was flatness over the entire right chest both anteriorly and posteriorly and entire absence of breath sounds. By means of a small hypodermic syringe about 15 cc of seropurulent fluid was aspirated which on examination at the University of Nebraska showed practically a pure culture of streptococci. The child died before morning.

No autopsy was obtained. A post-mortem mediation would seem to establish the following as facts or fancies:

1. The seven members of this household were all attacked by a similar infection, even though its manifestations were varied and multiple.
2. The babe must have been born with a bacteremia, possibly with a pleurisy.
3. Empyema may occur at a very early age.

Case No. 2. Helen T. On January 27, 1917, I was called to see this little girl aged five, who in the next two or three days developed the typical symptoms and physical findings of lobar pneumonia in the right lower lobe. She ran rather a severe course but had her crisis on the eighth day of her illness. The day following the crisis she had a little fever and each succeeding day a little more, with also some suspicious physical signs in the right base, notably more distant breathing and a suggestion of flatness and sense of resistance on percussion, and somewhat diminished tactile and vocal fremitus. Accordingly on the eleventh day of her illness aspiration was done. A slightly cloudy fluid was recovered. Having some slight hope that we might avoid operation I waited three days, and conditions being unimproved again aspirated obtaining a fluid seropurulent in character, much more cloudy than that of three days previous and containing many diplococci. I recommended immediate operation. The next day incision between the ribs was made and a tube inserted. After prolonged drainage during which time resection of a rib became necessary on account of the tube in some unaccountable manner having slipped into the pleural cavity, she made a good recovery.

This case illustrates the average course of empyema following pneumonia. The critical fall of temperature, gradual rise and assumption of septic type are of themselves sufficient to make diagnosis probable.

The physical signs made it more so and the aspirating needle made it conclusive.

### Conclusions.

1. When a pneumonia does not clear up in ten or fifteen days, be convinced there is something wrong.
2. More empyemata are secondary to lobar pneumonia in the child than to any other condition.
3. Owing to anatomical and physiological peculiarities in the child the physical findings of empyema are less typical than in adults.
4. All empyemata except cold abscesses and some of the interlobar collections of sterile pus should be operated.

## The Diagnostic Value of Cerebrospinal Fluid Examination.*

M. G. Wohl, M. D., Omaha.

The presence of cerebrospinal fluid was first discovered by Coligno in 1764, who thought it to be present after death. Haller found it in the spinal canal. However, it remained for Majendie to prove the relationship between the fluid in the spinal canal and that of the ventricles. The origin of the cerebrospinal fluid was not discovered until recently when Petit and Girard in 1902 have proven the secretory function of the choroid plexus.

The choroid plexus is a continuation of the vellum interpositum. It is lined by epithelium and extends into the ventricles, it is impermeable to a certain extent. I lay emphasis upon the latter since we know that some substances like alcohol, chloroform and urothropin pass from the blood into the cerebrospinal fluid. In diseased conditions, e. g., diabetic coma, the cerebrospinal fluid may contain acetone and diacetic acid; in uremia, urea; in jaundice, bile pigment; and in eclampsia, lactic acid.

---

*From the Pathological Department Nicholas Senn Hospital, Omaha. Read before Douglas County Medical Society, September 11, 1917.

The question of impermeability of the choroid plexus is of the greatest importance. Because of the supposed impermeable state of the choroid plexus Swift and Ellis have introduced the direct intraspinous administration of salvarsanized serum in cerebrospinal syphilis. This new method of attacking the spirochaetes in the nervous tissues has been received with great enthusiasm. However, in spite of the many advocates it has, the intraspinous use of salvarsanized serum or spinal fluid plus salvarsan has not proven the panacea of all the syphilitic nervous manifestations. My own experience with the intraspinous method is limited to observation of cases treated by different men for whom the serum, as well as the various tests on the spinal fluid of these cases is made in our laboratory, and in this way I dare say the results obtained in paresis and tabes dorsalis are not any better than from the conventional intravenous method. From a consideration of the pathology of these forms of syphilis, as we expressed it before our State Medical Association in Lincoln, we fail to see how the very small amount of salvarsan contained in the serum for intraspinous medication will reach the spirochaetes that are in the gray matter of the cortex of the brain in paresis, or have any effect upon degenerated spinal cord tissue in tabes dorsalis.

If the salvarsan does not reach the central nervous system when administered intravenously, because of the choroid plexus barrier, how will it get to the central lesion when administered intraspinally? However, in the interstitial type of syphilis, when the pathology is limited chiefly to the vessels and meninges, we have seen good results follow the intraspinous salvarsan medication. But in this type of cases equally good results are being obtained by the ordinary intravenous method. In connection with this we would like to call your attention to the auto-serum treatment of the bete noir of the pediatrician-chorea. It is based upon a somewhat similar supposition as the intraspinous treatment of syphilis, namely, the direct method of attacking the infection of the nervous system. The results that are forthcoming from the Jacobi Children's Department of the German Hospital of New York are so startling that they certainly merit the attention of the profession.

Function. A word as to the function of the cerebrospinal fluid. Mechanically it acts as a water pad to the brain, equalizing intracranial pressure and filling out dead spaces such as in epilepsy, where destruction of brain tissue is replaced by glia cells with shrinkage and atrophy of brain substance. (Ulzheimer).

That the choroid plexus withholds harmful material and manufactures antibodies for protection of the nervous system against infection is quite plausible. (Goldman & Kafka). Since the active principle of the pituitary gland has been found in the cerebrospinal fluid it is possible that it acts as a distributor of this vital active substance to the nervous system. (Cushing and Goetsch).

Pressure. The pressure of cerebrospinal fluid is of practical importance from both a diagnostic and therapeutic point of view. Although very accurate instruments are on the market for pressure determination, and their use should be more urged upon, yet we believe that if the fluid comes out from the puncture needle in about 40 to 50 drops per minute it is within the range of normal. If the spinal fluid is under increased pressure, an inflammatory or neoplastic process is probably taking place in the cerebro-spinal system. Under pathological conditions the fluid obtained may vary from a few drops to 100 cc. Small amounts of fluid or a dry tap sometimes may be obtained in spite of the existence of very serious pathologic changes. For example, in purulent meningitis the exudate may be so thick as to allow little of the fluid to escape from the needle.

In cases where the pathologic process interrupts the communication between the basilar subarachnoid space of the brain and that of the spinal canal, or of the aqueduct of Sylvius or foramen of Majendie, a very small amount of fluid is obtained.

From a case of Dr. Koutsky's of infantile basilar meningitis that recently came under my observation, we obtained only a few cc's of spinal fluid in spite of the existence of an extensive inflammation that caused exudation and agglutination of structures at the base of the skull with possible occlusion of ventricular foramina, since after tapping, the bulging fontanels were not diminished in the least. To repeat, then, in altered conditions of cerebrospinal system the amount of fluid is altered.

It behooves us to inquire as to the factors that disturb the balance between the formation and elimination of the fluid, (secretion and absorption). Frazier and Peet of Philadelphia have shown that overactivity of the choroid plexus, as a result of administration of brain extract, gives an increase in spinal fluid. Dixon and Halliburton have arrived at the same conclusion that the epithelium of the choroid plexus is stimulated by a choroid hormone. This point is of practical interest since it shows that certain cases of hydrocephalus may be due to an over active choroid plexus. Frazier and Peet have proved this experimentally and therapeutically. They have found that administration of thyroid will diminish the cerebrospinal fluid to one-third its normal amount, and clinically cases of hydrocephalus, due to overactive choroid plexus, have improved considerably under thyroid. An increase in the amount of spinal fluid will also depend upon its lessened absorption. The amount of cerebrospinal fluid and the rapidity of its absorption is in direct proportion to total available area of subarachnoid. Therefore, the more of this space put out of commission by a pathologic lesion (tumor or specific inflammation), the more rapid will be the accumulation of cerebrospinal fluid as in obstructive hydrocephalus, which condition may be relieved by surgical means. The employment of phenol-sulphophthalein will reveal the type of hydrocephalus, obstructive or hypersecretory. In connection with this it might be of interest to call your attention to the fact that Dana has recently been claiming that headaches of neurasthenia, as well as headaches following lumbar puncture, are due to defective action of the choroid plexus and the imperfect cerebrospinal circulation.

While a good deal of the origin, function and absorption of cerebrospinal fluid is still sub-judice, yet we know that a thorough laboratory examination of the cerebrospinal fluid is essential in diagnosis, prognosis and treatment of the diseases of the cerebrospinal system. Let me caution you, however, that like all laboratory procedures it has its limitations and errors. Sole reliance upon the laboratory is to be condemned the same as reliance upon clinical signs alone. The laboratory findings are to be interpreted in conjunction with the clinical symptoms of the case. Only then are we doing most for our patients.

To describe briefly the gradual stages of the examination of cerebrospinal fluid as used in our laboratory and their significance:

1. Appearance: The normal spinal fluid has a clear watery color. This appearance is preserved in tuberculous meningitis and syphilitic affection of cerebrospinal system, also frequently in the early stage of a meningococcus meningitis. In pneumococcic meningitis and in the later stage of a meningococcic form, the fluid is turbid. Turbidity of the fluid may be produced by hemorrhage, either from rupture of meningeal vessel or puncture of blood vessel while obtaining the fluid. If the hemorrhage is of meningeal origin, the spinal fluid will assume a yellowish amber tint after centrifugation. This is almost pathognomonic of meningeal hemorrhage. If hemorrhage is due to puncture of the blood vessel, the centrifuged fluid is clear, while the red blood corpuscles settle to the bottom. A yellow coloration of the fluid that undergoes massive coagulation is observed in a condition known as xanthochromia or froin syndrome.

Froin syndrome was popularized in this country by Mix. It almost invariably indicates a pathologic lesion, tumor, or inflammatory process that cuts off completely or partially the lower portion of the spinal canal, forming a separate sac.

2. Cytology. The examination of the spinal fluid for the number and character of the cells is, in our judgment, the most important element in the study of the fluid. For an increase in lymphocytes, except the pupillary changes, may be the earliest and the most easily recognizable symptom in syphilis of the nervous system. There are several methods for estimation of cells. The best is the use of a diluting fluid containing some dye, (methyl violet), and Fuchs Rosenthal counting slide. An important point to remember is to make the count as soon as possible after fluid is withdrawn for otherwise the cells settle to the bottom and degenerate.

The character of the cells is best brought out by staining the sediment of a centrifugalized specimen by Giemsa stain. A count of four to eight cells per Cmm. is considered normal. When the cell count reaches eight to twelve cells it is considered borderline, in which case the count should be repeated from five to eight days later.

A point well worth remembering is that

the repitition of the count should not be done within 24 hours after the first puncture. I have seen a marked increase of cells resulting purely from the puncture. A cell count over twelve is considered abnormal, (pleocytosis). An increase in lymphocytes indicates irritation of the meninges, although it is found more or less in all forms of meningitis. However, lymphocytosis predominates in tuberculosis and syphilis.

In poliomyelitis in the pre-paralytic stage the chief cell is polymorphonuclear leucocyte. After appearance of paralysis the cell found is the lymphocyte. With this exception, which can be easily ruled out, we might state that a lymphocytosis in the cerebrospinal fluid in a case with symptoms pointing to an acute or subacute meningitis, there is strong indication that the infection is tubercular. While the same increase in a chronic condition is the strongest evidence that the condition is cerebrospinal or parenchymatous syphilis.

It is now common knowledge that in the secondary stage of syphilis the nervous system is frequently involved, although there are no manifest clinical symptoms. The examination of the cerebrospinal fluid, however, will show an increase in lymphocytes. This is of the utmost practical importance in the prevention of the development of full fledged cases of paresis and tabes. No less an authority than Neisser stated that no case should be pronounced cured of syphilis until the cerebrospinal fluid has become normal.

An increase in the polymorphonuclear leucocytes indicates streptococcic, pneumococcic, or meningococcic meningitis. With improvement the polymorphonuclears are replaced by lymphocytes.

3. Protein Content. Normally cerebrospinal fluid has only a trace of globulin and no albumin. However, an increase in protein indicates invariably acute or chronic organic disease. The protein content in the cerebrospinal fluid indicates irritation of nervous tissue with an increase in vascular permeability. A simple bedside test for an increased protein in the spinal fluid consists in shaking a test tube, which is half filled with spinal fluid, and if the foam that is formed persists for half to one hour it indicates an increase in protein.

Among the other tests which have proven very satisfactory to us are the Pandy and Ross Jones. They are very simple and decisive. The first consists in overlaying 1 cc of saturated watery solution of carbolic acid with a drop of spinal fluid. Normally no change occurs. With an increase in its protein there results a bluish white cloud at the line of contact. The Ross Jones modification of Nonne's Phase 1 is very delicate. It consists in running spinal fluid (about ½ cc) on the surface of a saturated solution of ammonium sulphate in a small test tube, and if there is an increase in globulin a clear cut grayish white ring is formed at the line of contact.

4. Wassermann Reaction. It would hardly be justifiable at present to go into the philosophy and technic of this reaction. However, let me emphasize that in any case with a suspicion of syphilitic involvement of the central nervous system, a Wassermann on the blood is not sufficient. We have seen time and again negative Wassermann's of blood and strongly positives on the spinal fluid.

If the Wassermann reaction proves positive it may be difficult to decide whether the case is cerebrospinal syphilis or parenchymatous syphilis (tabes or paresis). However, the therapeutic test will help here. If the case is that of parenchymatous syphilis the Wassermann reaction, as well as the cell increase, and globulin, will persist for a long time in spite of energetic treatment, while in cerebrospinal syphilis energetic treatment will rapidly clear the Wassermann and the excess of cells.

Finally, one of the most valuable laboratory tests which helps to differentiate paresis from cerebrospinal syphilis is the Lange Colloidal Gold reaction. The test consists in adding 5 cc of gold chloride to the spinal fluid in various dilutions, varying from 1:10 to 1:5120. With normal fluid no change in color occurs and is represented by the figure zero. With spinal fluid from cases of paresis, the gold chloride is precipitated at maximum and the solution is completely decolorized. Complete decolorization is represented by figure 5. Between these two extremes, shadows of color occur running from red blue (1), lilac or purple (2), blue (3), pale or gray blue (4), to which numerical values have been assigned. The regularity with which these colors occur in certain conditions is striking. The luetic zone is confined to the first four or five tubes and the color never exceeds 4, or gray blue. The paretic zone comprises the first 4 or 5 tubes, the change of color being of type 5 (colorless). In the meningitic zone—Verschiebung nach Oben—the precipitation occurs in higher dilutions.

The Lange-Colloidal test has been to us of the greatest value and we feel that no spinal fluid examination is considered complete without a Lange gold chloride.

In conclusion let me urge a closer cooperation between the laboratory worker and the clinician. No laboratory result should be interrupted without a knowledge of clinical pictures of the case, as the results of the laboratory are only complimentary to those of the clinician, and vice versa.

### Bibliography.

1. Frazier, Journal American Medical Association, April 3, 1915.
2. Frazier & Peet, American Journal of Physiology, Oct. XXXV, No. 3, 1914.
3. Dixon and Halliburton, Journal of Physiology, 1913, XLVII, 215.
4. Boyd, The Canadian Medical Association Journal, November, 1916.
5. Sutter, International Clinics, 25th series, Vol. II, 1915.
6. Miller, Brush & Hammers, Johns Hopkins Hospital Bulletin, Vol. XXVI, No. 298, December, 1915.
7. Dana, Journal American Medical Association, April 7, 1917, P. 1017.
8. Sachs, Journal of The American Medical Association, Sept. 1, 1917.
9. Mix, Clinics of John B. Murphy, 1915, IV, 317.
10. Ayer and Viets, Journal of American Medical Assoc., Dec. 9, 1916.
11. Goodman, Archives of Pediatrics, September, 1916.
12. Wohl, M. G., Nebr. State Med. Jr., Oct. 1917, page 458.

---

## Present Status of Streptococcus Differentiation.

By W. C. Becker, M. D., Papillion.

The history of a streptococcus begins with the demonstration by bacteriologists of what had long been known to clinicians, namely, the close relationship of erysipelas purulent infections and puerperal sepsis. As early as 1865 chain-like organisms were found in the tissues of persons who had died of puerperal sepsis by Mayerhofer and others. About the same time Rindfleisch mentions the occurrence in the cardiac musculature after death of pyaemia of collections of small bodies which we now recognize as groups of cocci. Pasteur in 1879 cultivated a chain-like organism from lochia in some cases of puerperal sepsis and a little later Ogston demonstrated the presence of two kinds of organisms in pus, namely a chain-like organism and an organism which grew in clumps. He named these streptococci and staphylococci, respectively. About the same time, Fehlheisen cultivated a chain-like organism from cases of erysipelas and demonstrated that it was the etiological factor. Streptococci were now found in a great number of conditions and the question arose whether they are always identical or whether fundamental differences exist. The question is not one of mere theoretical interest but is of the greatest practical importance as rational biological treatment of the various streptococcus infections depends on the diagnosis of the type of organisms concerned. No group of organisms is the direct cause of more deaths than the streptococci. Not only as primary invaders in such diverse diseases as erysipelas, endocarditis, puerperal sepsis and others but as secondary invaders in various chronic diseases as tuberculosis, diabetes, cancer, are the immediate cause of death. In recent times, Rosenow (1) and others have demonstrated that appendicitis, cholecystitis, peptic ulcer, herpes zoster and many obscure lesions of the central nervous system are primarily due to these organisms. Stimulated by the brilliant results due to diphtheria antitoxin innumerable workers have attempted to secure antistreptococcus sera. In the course of this work, a great quantity of literature has accumulated concerning the differentiation of various strains of streptococcus. The more important points are the subject of this paper.

The first attempt at classification was from a morphological standpoint and streptococcus longus was thought to be more pathogenic than streptococcus mitior or brevis. It was soon shown that these characteristics were inconstant and appear to depend on the media upon which the growth occurred.

Attempts to differentiate by growth on various media were unsuccessful until Gordon, in looking for additional tests for bacterial sewage contamination of water, tested the fermentative reactions of streptococci on various sugar media. After testing many sugars with a great number of sewage strains of streptococci, he concluded that they could be grouped more or less definitely by the action on nine sugars. These have since don's work, Andrewes and Horder (2), Salmon been called Gordon's tests. Following Gor- (3), Winslow (4), and co-workers, Lyall (5), Hopkins and Lang (6), Kligler (7) and many others have thoroughly studied the fermentative reactions and grouped streptococci according to their ability to ferment the various sugars. Broadhurst (8) found that the fermentative reactions, aside from differences due to rate of growth, are remarkably constant under various environmental conditions. These tests have been correlated with various other tests the significance of which will be discussed later.

Probably the simplest and up to the present time the most available clinical classification is by growth on blood-agar plates. Marmorek was the first to show that pathogenic strains of streptococci caused hemolysis both in vivo and in vitro but this was not used in classification until Schottmuller (9) proposed his classification by growth on agar plates made by adding 2 c. c. of defibrinated human blood to 5 c. c. of ordinary agar. He distinguished three groups which he describes as follows: (1) Streptococcus longus seu erysipelatos which appears after 18-24 hours incubation as a grayish circular colony surrounded by a clear zone of hemolysis 2-3 mm. in diameter. (2) Streptococcus metior seu viridans which appears after 24 hours incubation as a very fine greenish colony, macroscopically no hemolysis being found except where the media is very thin. (3) Streptococcus mucosus which appears after 24 hours incubation as a mucoid, greenish growth. Other workers have recognized a non-hemolytic pathogenic strain. These varieties are more or less constant on any given kind of blood though many strains are found which appear intermediate in character.

Lyall (10) has described a classification based on the hemolytic properties and on the fermentative reactions. Holman (11) has recently advanced a similar classification, dividing streptococci into sixteen groups. The value of such classifications appears at the present time to be very doubtful.

Attempts to correlate these biologic reactions and immunologic reactions have been only partially successful. Floyd and Wolback (12) found that the groups separable by sugar tests could also be differentiated by agglutination and complement fixation tests. Kligler arrived at similar conclusions in studying agglutination and fermentation tests. Beattie and Yates (13) found that virulence for rabbits and sugar tests had no relation. Henrici (14) has recently studied the relation of streptococci grouped by fermentation tests and virulence and elective localization. He concludes that the carbohydrate tests are of no value from the stand point of virulence and of slight or doubtful significance from the standpoint of tissue localization. He found, however, that hemolytic streptococci are, in general, more virulent than non-hemolytic but that the two classes localize in the same tissues with equal frequency.

### Differentiation by Biological Methods.

Agglutination: Among the earliest attempts at streptococcus differentiation was study of agglutination, Van de Velde, the literature of which is critically reviewed in the article by Weaver, immunized rabbits and tested twenty-one organisms derived from scarlet fever patients by adding one part of homologous serum to fifty parts broth culture. He found that in twenty minutes at 37° C. clumping and sedimentation of homologous strains occurred while control tubes containing heterologous strains remained cloudy. Stimulated by these results many workers studied this reaction. Thus Meyer, Moser and Von Pirquet, Neufeld and many others confirmed Van de Velde's work, while Bordet, Bensaude, Aronson and others using various methods claimed that agglutination was so variable as to be undependable. Weaver (15) studied agglutination of streptococci from various pathogenic conditions with sera from various diseases using very careful controls. He found that streptococci cultivated from scarlet fever were agglutinated in as high dilutions by sera from erysipelas, typhoid, puerperal sepsis and lobar pneumonia as by scarlatinal sera and in the case of erysipelas in even higher dilutions. His experiments further showed that slight changes in the reaction of the media affected markedly the agglutination. Rolly (16) reviewing the work on streptococcus differentiation under his direction states that the results have been entirely negative and that no regularity in agglutination occurs wither with homologous or heterologous strains. Krumwiede and Valentine have recently studied the agglutination reactions of the S. viridians group. They found very slight cross agglutinations and concluded that streptococcus of "viridians" type constituted a heterogenous group. The relation of agglutination to the fermentative groups has been stated earlier in this paper.

Acid Agglutination: Michaelis devised a method of agglutination by means of various concentrations of acids in ionic dissociation and claimed extreme specificity for the reaction. Beniasch (17) refined the method and claimed that acid agglutination to streptococci fell within fairly narrow limits of H-ion concentration. Bergey (18) tested both methods in connection with fermentative reactions and concluded that no differences between organisms from human sources could be found by this method.

Opsonins: Denys (19) and his pupils observed that rabbit leucocytes in normal rabbit sera ingested a virulent strain of streptococci but not strains made virulent by animal passage. However, in the sera of rabbits and horses immunized against a virulent streptococcus, the leucocytes had a marked phagocytic power over the virulent cocci. Tunnicliff (20) found that in scarlet fever, rheumatism, erysipelas, the streptococco-opsonic index is below normal at the beginning of the disease and rises above normal as the acute symptoms subside. These variations are specific for streptococci and Banks (21) in particular found no striking differences using different varieties of streptococci.

Conglutination reaction: Swift and Thro were unable to secure definite results by the use of this method.

Lysis: Denys and LeClef (22) first demonstrated that streptococci grow as readily in streptococcus immune rabbit serum as in normal rabbit serum. They were, also, unable to find lysins in the immune serum of horses. Rodgers (23) was unable to demonstrate lysins in any of the antistreptococcus sera. Weaver and Ruediger (24) were unable to demonstrate lysins for streptococci in sera from normal individuals or those recovered from scarlet fever.

Antitoxins: No one has been able to demonstrate a streptococcus toxin or antistreptococcus toxins in the sera of persons recovering from streptococcus infection.

Precipitins: Attempts to secure precipitin reactions with streptococci have so far failed. Aronson has secured a weakly positive result by using chemical extracts. V. Eisler (25) was unable to secure a precipitation using a antigens a broth filtrate, an agar growth suspension and cocci dissolved by means of acids and alkalies. I was unable to demonstrate precipitins in the sera of persons recovering from scarlet fever or in streptococcus immune rabbits using a purified antigen made by the method of Pick (26), an "antiformin" antigen according to the method of Uhlenhuth (27) and an antigen made by precipitation of an "antiformin" antigen with saturated ammonium sulphate, redissolving the precipitate in physiological salt solution.*

Complement fixation: On account of the inability to secure a stable antigen from streptococci, the results have been very irregular. Besredka and Dopter (28), and Rolly and Kolmer (29) were unable to secure specific fixation, while Faix and Mallein (30), Liverato, Swift and Thro and Schleissner claim partial specificity. I have recently tested sera from normal persons, scarlet fever patients, chronic and acute arthritis, tonsilitis and poliomyelitis with various antigens prepared from organisms isolated from these conditions. Serum from one condition fixed complement as often with a hetorologous antigen as a homologous antigen. My experience would seem to indicate that complement fixation was unreliable in determining the origin of streptococci.

Anaphylaxis: Muller (31) attempted without success to produce passive anaphylaxis by injecting various antistreptococcus sera and then injecting streptococcus cultures. He also attempted without success to produce active anaphylaxis. Using the method of Friedberger (32) to produce anaphylatoxins, he was also unsuccessful. Aronson also was unsuccessful in producing streptococcus anaphylatoxins. Dodd and Aoki (33) were successful by using a modification of Friedberger's technique, in producing anaphylatoxins in some cases. They believe that the anaphylatoxins are specific for different strains. Davis (34), Clough (35) and Marxer were unable to show differences except in a few strains of streptococcus viridans as contrasted with hemolytic streptococci.

Elective localization: A new biological method has been popularized by Rosenow who has shown that streptococci when freshly isolated from various lesions tend to locate in a similar region when injected in experimental animals. This method is applicable only to freshly isolated strains and depends upon what criteria are used to determine specific localization. In the absence of adequate information the exact value of this work cannot be determined at the present time.

---

*Trans. Chicago Path. Soc., 1915-16.

### Discussion.

In summing up the work done on streptococcus differentiation we find that the chief value has been in realizing that various diseases can arise from foci of infection in tonsils, teeth and various sinuses. No such groupings can be made at present among streptococci. While streptococci can be separated on the basis of hemolysis and sugar tests, such data is at present of very slight value in prognosis or treatment of streptococcus infections. That streptococci may change due to various factors as food supply, oxygen tension, etc., as claimed by Rosenow seems possible. However frequent and important these sudden changes from streptococci to pneumococci may be, the work of Neufeld, Cole, Avery and Dockez, and Mathers has shown that pneumococci as disease producers can be rather definitely grouped.

### Bibliography.

1. Jour. Inf. Dis., 1915-16, p 240.
2. Lancet, 1906, 171, p 708.
3. Centralbl. f. Bakt., 1908, 47, p 1.
4. Jour. Inf. Dis., 1912, 10, p 285.
5. Jour. Med. Research, 1914, 30, p 487.
6. Jour. Inf. Diseases, 1914, 15, p 63.
7. Jour. Inf. Diseases, 1915, 16, p 327.
8. Jour. Inf. Diseases, 1915, 17, p 277.
9. Munchen, Med. Wochenschr., 1903, 50, 1, p 849.
10. Jour. Med. Research, 1914, 30, p 487.
11. Jour. Med. Research, 1916, 33, p 377.
12. Jour. Med. Research, 1914, 29, p 493.
13. Jour. of Path and Bact., 1911, 16, p 247.
14. Jour. Inf. Diseases, 1916, 19, p 572.
15. Jour. Inf. Diseases, 1904, 1, 911.
16. Centralbl. f. Bakt., orig., 1912, 61, 89.
17. Zeitschrift f. Immunitatsf., 1912, 12, 268.
18. Jour. Med. Research, 1912, 27, 67.
19. Centralbl. f. Bakt., orig., 1898, 24, 685.
20. Hour. Inf. Diseases, 1907, 3, 304.
21. Jour. of Path. and Bact., 1907, 12, 113.
22. Centralbl f. Bakt., 1898, 24, p 685.
23. Handbuch d Techn Methodic der Immunitatsf., 1909, II, p 331.
24. Trans. Chic. Path. Soc., 1903, 5, 285.
25. Handluch d. Technic u. Methodic d. Immunstatsf., 1909, II, p 852.
26. Ibid., I, p.
27. Centralbl. f. Bakt., 1902, 42, p 62.
28. Ann. d. l'Inst. Pasteur, 1904, 18, p 373.
29. Arch. Int. Med., 1912, 9, p 220.
30. Presse Medicale., 1907, 15, p 777.
31. Zeitschr. f. Immunistatsf., 1911, 10, p 164.
32. Zeitschr. f. Immunitatsf., 1911, 9, p 216, 369, 575.
33. Zeitschr. f. Immunitatsf., 1912, 13, p 200.
34. Jour. Inf. Diseases, 1913, 14, p 386.
35. Bull. John Hopkins Hosp., 1915, 26, p 37.

---

## Presentations and Their Diagnosis.*

J. N. Campbell, M. D., Stamford.

Perhaps a better title for this paper would have been prolonged or difficult labor, because this is the subject I wish to discuss. However as abnormal presentation is as a rule the chief cause of a prolonged labor, the study of abnormal presentations and their correction should be the paramount issue.

At the start I wish to make the assertion that no labor should exceed twenty-four hours in duration, and if it does, it is safe to assume that you have some abnormal condition to deal with. I am not going to take up the diagnosis of normal conditions such as R. O. A. and L. O. A. for as a rule these require no accurate diagnosis and labor is short and uneventful. But where a case shows no progress after several hours, pains are strong, dilatation is more than usually slow, or none at all, and the patient is slowly becoming exhausted that an accurate diagnosis becomes as imperative in obstetrics as the exploratory incision in the realm of surgery.

Of all conditions that lead to prolonged or difficult labor the occipito-posterior leads in point of frequency in the proportion of three to one. Most labors with the occipito-posterior will, if unassisted, consume from thirty-six hours upward. If early recognized and corrected they average little longer than occipito-anterior cases. Rittenhouse of Chicago says that 75% of his consultation practice is caused by the occipito-posterior position which the physician in charge had not diagnosed or had been unable to relieve.

Some authors give the frequency of occipito-posterior positions as 23%. This seems a little high in my experience, but may be correct. Accepting as a fact therefore that the O. P. position is by far the largest cause of difficult labor, the question of diagnosis and correction naturally follows.

There are four methods of establishing a correct diagnosis, only one of which is absolutely accurate and reliable.

1. Digital palpation of the sutures and fontenelles.

---

*Read before Republican Valley Medical Association, Minden, October, 1917

2. Location of the fetal heartbeat.

3. Manual palpation of the foetus through the abdominal walls.

4. Digital palpation of an ear through the vagina.

For this last method we are indebted to Prof. William Rittenhouse, of Chicago, who in my estimation is one of the best obstetricians in this country. I believe it is a fact, and that those of you who are observing will agree, that no man, be he expert or not, can make an absolutely accurate diagnosis of an O. P. position in every case by any or all of the first three methods. A number of conditions make for the unreliability of them. Viz, Test No. 1 is conclusive if the sutures and fontenelles can be felt, but some heads are so smooth that even the expert cannot outline them accurately. In others moulding has occurred to such an extent that they cannot be accurately recognized.

No. 2 is reliable only in the L. O. A. position, and is inclusive in the other three positions.

No. 3 is of little value in a patient with thick abdominal walls, or a tense hard uterus containing much water. But the 4th method, that of passing the hand up until an ear is gotten hold of is at once absolutely conclusive and accurate. Even one untrained in this work would be able to tell at once whether the occiput was anterior or posterior. The position can now be accurately diagnosed in every particular, whether R. O. P. or L. O. P. Of course this method requires an anesthetic, but an anesthetic is as justifiable for purposes of diagnosis in difficult obstetrical cases as it is in medicine or surgery where an accurate diagnosis is necessary. Other objections may be raised, as there is the necessity of carrying the hand into the uterus, thus incurring the risk of infection, but the man who enters the vagina for the ordinary purposes of examination without a surgically clean hand has no place in the practice of obstetrics.

There is no more danger of carrying infection into the uterus, if proper precautions are taken than there is in inserting the hand into the abdomen during a laparotomy. The obstetrician should be just as particular as to the surgical cleanliness of his hands as the surgeon. Rubber gloves should always be worn and every precaution as to asepsis should be carried out. It is remarkable that so simple and at once so accurate a method of diagnosis should have escaped discovery for so many years, and indeed the same thing can be said of the method of correction of these cases, also brought out by Rittenhouse, which is almost as simple as the diagnosis, when compared to the difficult and sometimes dangerous methods employed by other authors and experts. It is well to say here that only a very small proportion of these cases would ever terminate naturally without interference.

In an O. P. position the head should rotate upon reaching the pelvic floor, and terminate in an O. A. position. In only a small head with a large pelvis will this be accomplished. Otherwise it cannot be borne. A natural termination in a persistent O. P. position is almost an impossibility. This accounts for so many disastrous forcep deliveries, so many cervical and perineal tears, so many exhausted mothers, so many dead babies, and finally, but most emphatically not least, the ultimate arrival of the mother at a later day at the gynecologist's operating table.

In looking over the various textbooks I am impressed by the rarity of good advice, and in most of them by the difficult procedures recommended for correction, some of them dangerous even in the hands of an expert. All of these books state that the head should in this position rotate to the symphysis pubis in its descent, but in case it does not, the methods recommended are unpractical in the hands of the average practitioner. The chief method recommended is the one of applying the forceps, of course dilatation is supposed to be complete or nearly so, making traction and rotating the head as far as possible. Then reapplying the blades and rotating further, keeping this procedure up until rotation is accomplished. Sometimes this method is satisfactory, more often not, to say nothing of the danger likely to be inflicted upon the soft parts of the mother, or upon the fetal head. The sense of touch is lost, and progress must be largely guessed at.

One writer advises applying the forceps and twisting the head around until the front part of the forceps points towards the mothers sacrum. The anatomy of the mother's pelvis, and the curves of the blades seem to render this procedure certain to inflict injury upon the mother. The method recommended by Rittenhouse is so simple and easy that all but a very few of these cases can be corrected and delivered in a short time, without resorting to measures that are dangerous, difficult or complicated. It is so simple indeed that any average practitioner who has an average knowledge of obstetrics can do it easily the first time he tries it. Here is the method. I give it in the exact language of Rittenhouse.

"After the patient is fully anesthetized, the hand should be introduced into the vagina, (slowly so as to not lacerate the perineum). An exact diagnosis should be made by palpating an ear, so as to ascertain the degree of obliquity. The head should now be lifted up and rotated a half circle, bringing the occiput to the front so that this, an R. O. P. should be converted in a L. O. A., while a L. O. P. should be converted into a R. O. A. I advise the half circle rotation because when I have tried rotating only a quarter circle I have found a tendency to spring back to the original position. This is no doubt due to the moulding of the mothers soft parts. In grasping the head to rotate it the occiput should rest in the hollow of the palm, the operators fingers projecting past it far enough to touch a shoulder, so that the body may be rotated with the head. I find that the body rotates so easily that possibly this precaution may be unnecessary. But I always advise it for fear that without it the neck might be twisted to a dangerous degree. Another precaution to be observed is, that if a loop of the cord or an arm should come down, the prolapsed part should be restored before allowing the head to settle down into the brim.

The position having been converted into an occipito-anterior, the operator may now choose whether he will withdraw the anesthetic and give nature a chance to complete the labor, or whether he will at once apply the forceps and deliver. In deciding this point it is well to be guided largely by the patient's condition before the anesthetic was given. If the contractions were vigorous, and the patient was not unduly exhausted, nature may be given another chance. But as a rule I believe it is wiser to avoid further delay. I believe the profession is beginning to recognize more and more the unwisdom of permitting extreme exhaustion of the mother if it can be avoided. Undue exhaustion carries with it greater dangers than the slight risks of early assistance. Another objection has been raised to the effect that, if the head were low down in the pelvis it would be difficult or impossible to lift it up above the brim. The answer to this is twofold. In the first place the cases in which the head descends are not the ones in which help is required. As a rule if the head descends it will rotate. It is when the head remains high up until the mother is exhausted that we have to offer assistance. In the second place, even when the head had been dragged down low in the pelvis by means of the forceps, in a vain attempt to deliver without rotation, I have always been able to lift it up if the patient was well anesthetized and placed in Sims position. True impaction is rare. In a few cases where the occiput had rotated to the hollow of the sacrum, I had a little difficulty in getting the head up above the brim, but patient effort was always successful. In this case a twist must be added to the upward pressure. In other words the head must be sent back the way it came. Lifting it directly upward without any rotary movement necessarily would be unsuccessful because of the promontory of the sacrum."

This then briefly is Rittenhouse's description of his operation, which he calls "manual rotation of occipito-posterior positions." To those of you who have never tried it I earnestly recommend it to your attention, and assure you that you will be astonished at the ease and speed you can arrive both at a diagnosis and correction of this most troublesome and frequent complication of child birth. It was my intention to take up some of the other abnormal presentations, such as breech, transverse, etc., but a full consideration would take up too much time and this paper is already too long. However, there is one other condition which I would like to mention, which stands second to O. P. positions as a cause of prolonged or delayed labor, and which I have never seen mentioned in text books, or the usual literature treating of these conditions. That is a "short bag of waters." When during a pain the sac protrudes through the os, it makes an excellent dilator. But when it is too short to protrude it can have little or no effect as a dilator, and the pressure of the water contained in the sac quite effectually prevents the head from elongating and acting itself as a dilator. The diagnosis is easily made by passing the finger between the os and the margin of the sac during a pain. If the finger can be readily passed the sac is not doing its duty as a dilator, for if it was it would be pressed so hard against the os that the finger could not be introduced without danger of rupturing the sac. The remedy is just as simple; rupture the sac at once, regardless of the degree of dilatation. If the diagnosis is correct and there are no other complications you will be astonished at the rapid progress made in dilatation after this is done. The next time you have a slow tedious case of dilatation and the indication is present try this. Finally I wish to say that there is one thing regarding O. P. positions which should lead us to suspect such a condition before any of the above mentioned procedures are taken up and which point to the necessity of a correct diagnosis. I refer to the often observed fact that in O. P. positions unless the head is very small, and interference will probably be unnecessary, there comes a time during the process of dilatation when progress practically ceases, even though pains continue strong and regular. This is usually when dilatation is one-half to three-fourths complete. A much larger head can be borne without assistance if it lies occipito-anteriorly than if it lies occipito-posteriorly. Only a very small head starting with the occiput behind will rotate to the front when it reaches the pelvic floor. The larger one will practically come to a standstill before the first stage of labor is over. Therefore, when during the process of dilatation progress seems to stop, pains continue with uninterrupted strength and vigor, it is proper to suspect that you have a posterior position to deal with, and if conditions do not soon improve it is justifiable to make sure of the condition present, that valuable time will not be lost while the mother's strength is waning.

It is a well known fact that the majority of general practitioners do not like their obstetric work and would willingly escape it if it were possible. This should not be, as a reputation as a good accoucher is one of the best assets of the general practitioner. And one of the things that makes obstetrics so hard and so unsatisfactory is a lack of acquaintance with some of the simple methods enumerated above. Normal labor is said to be physiological, but when some abnormal condition is encountered it is decidedly pathological and must be dealt with accordingly. Therefore it is up to us to neglect nothing which will make for improvement, and will help to make the oft dreaded ordeal as short, painless and safe as is consistent with safety and sense.

## Empyema of Nasal Accessory Sinuses.

H. B. Lemere, M. D., Omaha.

The purpose of this paper is to arouse discussion on this subject at a time when pus conditions of the nose are prevalent. It is manifestly impossible to cover the whole of this subject in the time allotted, and I shall esteem it a favor, if those who honor the paper by discussion will bring out those points of importance which this paper does not contain.

The general use of the roentgen ray and the more common study of the plates by the general practitioner has made the anatomy of the size and relationship of the sinuses much more popular. I feel sure that still more minute study of these cases with a skull for reference will still further improve our knowledge of these conditions. I shall not in this paper discuss the anatomy except to call attention to the very variable size of the frontals in different subjects. In some cases they are rudimentary or entirely absent, and in others they are so well developed as to extend over almost the entire orbit.

The symptoms of sinus disease present certain well marked symptoms each more or less individual to the sinus involved. The following are diagramatic sketches of cases in which the involvement of the different sinuses are considered as uncomplicated cases.

### Maxillary Antrum.

Adult patient states his case as follows: One week ago caught cold in the head. The cold caused a rhinitis in which the left side was more involved than the right. Had severe neuralgia in the left cheek and in the upper teeth on that side. After almost continuous pain for two days something broke and pus and blood were discharged from the left nostril. Since then every morning at about 11:00 the pain commences and continues for about three or four hours. There is a discharge of yellow pus from the left nostril and tenderness over the left cheek and in the left upper teeth.

### Frontal Sinus.

Symptoms are very similar to the above, except that the pain will be more localized to the frontal sinus. The headache will be the more prominent symptom. The anatomical peculiarities of the frontal sinus must be

(Continued on page 57)

# THE NEBRASKA STATE MEDICAL JOURNAL

Published monthly by The Nebraska State Medical Association.

Irving S. Cutter, Editor..........Omaha
A. F. Tyler, Associate Editor..........Omaha
J. M. Aikin, Business Manager..........Omaha
Room 468 Brandeis Building.

Publication Board.

F. A. Long, Chairman..........Madison
W. O. Bridges..........Omaha
B. F. Bailey..........Lincoln
J. M. Aikin, Ex-Officio..........Omaha

Subscription $2.00 Per Year. Single Copies 20c Each.

Address all communications to J. M. Aikin Business Manager, 468 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

**Vol. III. February, 1918. No. 2**

## When Shall We Learn?

And it came to pass that in the early days of the year 1918 A. D., that a medical man did dream and his dream was troubled, albeit that he saw countless hordes of people approach and surround him; people that did scoff and revile him and mock at him and looking closely he did see clearly and did recognize them as doubters, imitators, quacks and charlatans. From the midst of them there came up toward him a group of women who carried banners and emblazoned on the banners were these words: **"There shall be no research laboratory in connection with the American Red Cross for the benefit of our soldiery at the front,"** and the leader of the band did step forward and point knowingly at the wording on the banner saying: "Read that, thou schemer, the dictum has gone forth that thy reign is nearly ended; thy race is run." And the medical man shuddered and only breathed anew with the vanishing of the band. Then he observed a group slowly approaching afoot and on the banner carried by the leader of this group he read these words: **"We are the only true physicians who seek to heal all the ills of mankind; pestilence and scourge fall before our presence. We are the bone manipulators; and we are acknowledged the world's greatest anatomists as evidenced by our researches and publications. We heal by touch, by pressure and by manipulation. You, O! Medical Man, shall yield to us the care of the sick and suffering of our soldiery. We demand that our Government issue to us commissions in the Medical Reserve Corps placing us in the rank of those who shall be responsible for the lives of American patriots at the front."** And then this band vanished. And lo! looking again another band appeared and on their banners appeared the words, **"Nature's Physicians"** and rousing from his lethargy the medical man did cry "what manner of men are ye?" and they answered and said "O! thou Medical Man thou hast run thy race, thy end is nigh. We are the true physicians. The band whose rear guard has just vanished are scoffers and maligners. Our practice is founded upon nature. We teach the truth and only the truth, and if the petition which the Osteopaths now make be granted we too shall demand commissions in the Medical Reserve Corps transferring to us the care of the sick and suffering of our soldiery." And all this while there sat smiling to one side a liberal concourse of people in whose midst a banner lifted aloft bearing the words **"The league of medical freedom,"** and soon there arose from this group a spokesman who said: "O! Medical Man we protest most vehemently against the use of vaccines, antitoxins, serums and what not that are calculated to poison the blood of our innocent soldiers. Scourge them not with the so-called protective sera, but let them live exposed alike to the ravages of disease and of the Huns." Then the multitude rose and mocking, left and the medical man rested ill and he murmered "woe be unto me, my days are numbered and the face of the Lord is against me. My people have gone astray and are following after false Gods."

Presently a star shone full upon his face and glancing up he beheld the form of an angel, a little child who spake and said: "O! Medical Man I come as an everlasting rebuke to those of the first group in your dream for I in life was happy, my parents loved me, but their delusion permitted the dread diphtheria to grow and flourish in my throat, to poison and permeate my being and paralyze my heart and the Lord did take me unto him and he bade me speak to you on behalf of the thousands who are like unto me." And then there appeared another angel, a child, who said: "O! Medical Man, I am an everlasting rebuke to the second group. My mother and father did love me on earth, but when an abscess formed in my intestines I was treated by rubbings, pullings and jerkings at the hands of a man who called himself a doctor and I went to join the angel band and the Lord did bid me speak as I have spoken." As the angel ceased speaking a mild peace permeated the dreams of the medical man.

And he saw a vast multitude of people, people who filled the hills and valleys and their countenances betrayed wisdom and understanding and they did say, "Despair ye not O! Medical Man, for we know the true value of your work. Quacks, imposters and charlatans shall not be entrusted with the care of our soldiery. We know too well the accomplishments of thy profession; thy victory over diphtheria, over typhoid, over malaria, over yellow fever, over Asiatic cholera. Cans't thou not point to the heroes of thy profession who have laid down their lives that others might live? Hast thou not made habitable the waste places of the earth, the jungles where white man could not live and hast thou not on occasions innumerable preserved to us our loved ones from nature's enemy—disease? So despair ye not, sects may come and sects may go, but science is truth and truth will not die. Take then our right hand. We pledge thee that the lives of the flower of American youth shall not be unduly jeopardized by disease or battle or by the incompetence of the untrained healers of sects or cults."

### The Yearning to Know.

Of all modern poets none has so well divined the spirit of Science, as has Tennyson. In the words of his Ulysses many a physician has, no doubt, found an expression of his own secret inspiration.

I am a part of all that I have met;
Yet all experience is an arch wherethro'
Gleams that untravelled world whose margin fades
Forever and forever when I move.
How dull it were to pause, to make an end,
To rust unburnished, not to shine in use!
As tho to breathe were life! Life piled on life
Were all too little, and one to me.
Little remains, but every hour is saved
From that eternal silence, something more,
A bringer of new things, and vile it were
For some three suns to store and hoard myself,
And this gray spirit yearning in desire
To follow knowledge, like a sinking star
Beyond the utmost bound of human thought.

### Minnesota Medicine.

It is with pleasure that we have received the first copy of Minnesota Medicine. This is the journal of the Minnesota Medical Association and makes one more state organization to join the ranks of state owned journalism.

The initial number is excellent and we look forward to receiving subsequent numbers with great satisfaction. Minnesota has a large membership in the profession and has abundant material to draw upon for publication of one of the best journals in the United States. We congratulate her upon this step.

### Prompt Use of Antitoxin.

With the onset of the diphtheria season the attention of the profession is drawn to the importance of the early administration of antitoxin. Immunizing doses should not be less than 1000 units and therapeutic doses not less than 5000 units. In severe cases the serum should be given intravenously while in the average case the intramuscular injection is used.

Antitoxin should be given at the earliest possible moment. A recent epidemic in South Boston of 190 cases of diphtheria was abated without a death due wholly to the early administration of the serum.

It is a good habit to carry a few blood serum culture tubes and culture all suspicious throats and nasal secretions. Prompt reports on cultures may be obtained from the State Laboratory at Lincoln and border line cases exactly diagnosed.

---

Our county secretaries merit commendation for action and promptness in collecting and forwarding the 1918 membership dues to this office as per the 1917 order of our House of Delegates. In a few cases the amount sent with the roster was for $3.00 instead of $4.00 per member, as indicated by our new rate for dues. We closed the year 1917 with 1138 members, enrolled. Never in the 50 years history of the Nebraska State Medical Association have we attained that membership. In this, the semi-centennial year of our State Association, may we not maintain the record established in 1917?

### Food-Borne Infections.

Gastro-intestinal disturbance due to food eaten is a common ailment and the majority of such attacks have, since the work of Brieger in the 80's been attributed to the formation of ptomaines resulting from the decomposition of foods. The term ptomaine was first applied by Selmi to certain compounds basic in character, formed during the later stages of protein disintegration. They arise, therefore, at a time when decomposition is so far advanced that such food would be almost invariably rejected as nauseating and unfit for use. This consideration has shaken the belief in ptomaines as an etiological factor in disease and moreover, a careful study of outbreaks of food poisoning has demonstrated that they were not due to spoiled food containing ptomaines but either to the presence of true bacterial toxins, or, to infection with specific bacteria borne in or upon the implicated food article. This distinction is important with regard to the measures that need be taken hygienically. To prevent infection is a different procedure from that designed to prevent the use of foods containing the products of bacterial growth.

Every physician will at once realize the vital importance of "carriers" in these considerations. In general, microorganisms, pathogenic to man, do not thrive outside the human body and tend to perish quickly. But in foods, conditions obtain very much like those in artificial culture media. It is significant that a large proportion of the recorded outbreaks of food poisoning have been traced to foods that have been allowed to stand before being eaten. Cooking may even provide a favorable temperature for bacterial multiplication as when the degree of heat in the interior of the food mass reaches an incubating rather than a sterilizing temperature.

The second type of food borne infection is that in which food is contaminated at its source. The infection of milk by the bacillus of bovine tuberculosis is an example. Another is the infection of meat by the bacilli of the paratyphoid enteritidis group affecting particularly cattle and swine. Meat from such sources is responsible for the great majority of meat poisoning outbreaks.

Jordan in a recent vice-presidential address before the American Association for the Advancement of Science concludes in dealing with this topic, that, "the prevention of food-borne infection at present can be best effected by (1) thorough pasteurization; (2) employment of healthy persons for food preparation and serving; (3) examination of food animals at or shortly before slaughter; (4) general cleanliness of surroundings where food is prepared or served; (5) use of food in a fresh condition."

### Coordination in Chemical Education.

Due to the fact that there has been a marked development in all lines of chemistry, that which is closely related to the practice of medicine has consequently increased in importance. We feel that in the past there has not been sufficient stress placed upon chemical education for those who expect to take up the practice of medicine as a life work. It is within the memory of many of us that a few of the simpler chemical experiments comprised the entire instruction received by the medical student. In recent years this condition has been changed, so much more emphasis being placed upon instruction in chemistry but the field has so broadened that it appears still more emphasis must be placed upon instruction in this subject. On account of the crowded curriculum in medical schools there is a question of how much time can be devoted to this subject as it would necessitate crowding out time given to other subjects. This difference could be overcome by close coordination of the chemical department in universities with medical schools. We feel that if the medical instructors and instructors in chemistry could get together and work out a plan of cooperation, this question would be much nearer solution. We notice with satisfaction that such a plan is under way in many colleges.

### Ohio Medical Association Active on Income Tax.

Copy of resolution unanimously adopted by Council of the Ohio State Medical Association, at the regular quarterly meeting held in Columbus, Monday, January 7, 1918.

"Resolved by the Council of the Ohio State Medical Association, after a careful investigation of Section 209 of the War Revenue Law: That that provision is entirely unfair, and works a serious injustice to professional men, this injustice being more particularly marked in the case of physicians, who without exception have always done a large amount of charity work, and who in particular as the result of the war have had increased work with lessened incomes.

"That the tax is particularly obnoxious because it imposes a special burden upon men who earn their incomes, while it exempts from that burden owners of inherited wealth, who earn nothing but are simply parasites.

"That we, therefore, call upon our representatives in congress to use their utmost endeavors to secure a repeal of this unjust and onerous tax which, so far as we can learn, has not been imposed, or even contemplated, in any of the other countries engaged in the present war."

---

### Empyemo of Nasal Accessory Sinuses.

(Continued from page 53)

borne in mind. Often the sinus on one side may encroach greatly on the space of the other side.

Adult patient states he has had severe pain over the eye for the past week. He did not know whether the pain came from his eye or was in his forehead until about the third day when there was a bursting with discharge of blood and pus from the nose with some relief. It is still extremely painful and tender over the eye and pus discharges from the nose. The headache is severe and he cannot use his eyes for close work or concentrate mentally.

#### Ethmoid Cells.

There is not the regular daily recurrence of pain that is so constant in antrum and frontal infection. Many times all the symptoms are referred by the patient to his eyes.

Adult patient has had severe pain in and behind the eyes for the past few days. The eyes stick together, he has some nasal obstruction apparently in the region of the bridge of the nose. There is some conjunctival infection. It is painful to move the eyes; they are sore.

#### Sphenoid Sinus.

The pain from the sphenoid is seldom localized exactly, that is the pain is generally a referred pain. The pain of the sphenoid is referred to the back of the head. The announcement of symptoms from a typical acute sphenoid abscess would generally be as follows: For the past week severe neuralgia localized at the back of the head. Scalp sore. After two or three days something somewhere in the head broke and there was a dropping in the throat of pus and bloody mucus. The neuralgia is now not quite so severe and the pus discharged into the throat is no longer tinged with blood.

Examination of the nose in all these accessory sinus troubles will as a rule show a very similar picture. The middle and inferior turbinates will be so swollen that nothing definite as to the point of exit of the pus can be made out until these bodies are contracted by the application of a 4% cocaine solution on a swab. In a few minutes a good view will be obtained. If pus is seen coming down beneath the anterior end of the middle turbinate, a frontal or maxillary sinusitis or anterior ethmoiditis will be suspected. Holmes pharyngoscope constructed on the same principal as an electric cystoscope can be passed along the inferior meatus and a very clear view obtained of the posterior nares and naso pharynx. Pus around the naso pharynx would indicate sphenoid or posterior ethmoid involvement.

Besides the location of pain and the exit of pus, transillumination and roentgen examination of the sinuses will indicate the sinus involved. There are many factors which control the density of the shadows from these cavities so that too much importance must not be placed on X-ray findings without other corroberative evidence.

As the treatment of acute suppuration of the nasal cavities does not materially differ with the sinus affected, it is unnecessary for successful treatment to determine the sinus involved. This is true only when the case is not secondary to a history of chronic neuralgia, chronic cases should receive different treatment from the acute infections of formerly healthy sinuses. This paper deals only with these acute infections. Therefore a roentgenogram in these cases is not generally necessary for diagnosis. The treatment will consist of the application of cocaine to the vicinity of the openings of the involved sinuses. If the cocaine is properly applied there need be absolutely no absorption and no constitutional effect. There will be only three or four drops of a 4% solution actually in the nose. This will not reach the pharynx and will almost immediately be washed out leaving only its local reaction on the vascular structures of the turbinates. Applied in this manner there is no possibility of producing a liking or craving for the drug as none of the drug is absorbed and the discomfort of the application is distasteful to the patient. After contraction, the nose is very thoroughly washed out and blown freely. The free blowing acts as a suction pump in drawing the pus from the sinuses. An actual suction pump may be used as a still further help. The home treatment will consist in washing the nose free of the pus at frequent intervals with free but not violent blowing of the nose. The danger of blowing pus into the ears by violent blowing of the nose should be guarded against by cautioning the patient in this regard and also instructing him to leave both nostrils free while blowing, thus preventing any inflation of the ears by back pressure. The blowing of the nose constitutes an air douche which is of the utmost value in freeing the nose from infection. It should be persisted in frequently as long as the condition lasts.

The question of an oily or watery solution is frequently debated. In my hands some modification of Dobell's solution has been most effective in pus cases. It is much more antiseptic than the liquor alkalinus antisepticus. Laboratory tests seem to prove that a watery solution applied to a normal nasal mucous membrane makes it less resistent to infection, but we are not dealing with a normal healthy mucous membrane but one suffering from pyogenic infection and as I propose to show, the solution to be effective must also not be confined to the nasal cavities proper, as in the experiments, but must be encouraged to enter the accessory sinus cavities or at least come in contact with the thickened secretion obstructing their ostia. The temperature of the solution should not be greater than body temperature nor lower than 70 degrees Farenheit.

There is a prejudice against the term nasal douche due to the universal condemnation of the old time irrigator and tube which produced so much middle ear infection and which was the only nasal douche known. The little glass irrigator, known as the Bermingham nasal douche bears no relation whatever to the old douche. The danger from the old irrigator consisted in the volume of water under pressure entering the naso-pharynx through one nostril with perhaps the other obstructed or partially obstructed. Under these circumstances, there was imminent danger of forcing infected material through the eustachian tube and into the middle ear. This danger does not exist in any degree with the little glass vial. The medicine is introduced into the nasal cavity, the nostrils closed and the head thrown down so that it is completely everted. The solution will now penetrate the middle and the superior fossa and reach the ostia of the accessory sinuses. With the nasal spray as commonly used through the anterior nares the construction of the nose will prevent the solution reaching the sinuses or their ostia as effectually as a good roof will prevent the rain entering the house.

After the head has been held down a few seconds, the nostrils are blown with no closure leaving them entirely free. Under these instructions, I have never seen a middle ear infection resulting from the use of the little nasal douche. The application of towels wrung out of hot water over the upper part of the face and inhalation of the steam from them aids greatly in promoting free drainage. Camphor, menthol and eucalyptol in oily sprays help to reduce the turgescence of the turbinates and promote drainage. Internally, morphine has a drying effect and I prefer aspirin. Aspirin has an analgesic effect and also modifies the severity of the infection. I often give it supported by the monobromate of camphor. I think careful general care of the digestive tract is very important in lessening the severity of the pain. A general hot bath will assist in loosening and stimulating the secretions. Many of the symptoms are intensified after a sound night's sleep. In severe cases it is of advantage to wake the patient at four hour periods during the night and make applications of heat and wash out the nose. The regularly recurring periods of exaggeration seem to bear a constant relation to the meal time and careful attention to digestion is an important factor. I have tried to limit this paper to my practical experience with simple uncomplicated sinus abscesses and so have not included those infections of the antrum caused by dental necrosis which require different treatment.

---

## Observations Upon Caesarean Section.

Charles C. Allison, M. D., Omaha.

No one familiar with general practice, and in touch with the germane literature, can but feel that Caesarean Section entails a color of danger of being overdone; it is dramatic both to the patient, and in an anticipated abstract to the surgeon; it is historically interesting, bearing the suggested totem of a conveyed patrician heritage, silent but appealing arguments for its popularity.

In the execution of a Caesarean Section, assuming proper indications, the major features of the operation are not difficult for the qualified to grasp. (a) An abdominal incision having one-third of its length above the umblicus. (b) Accurate packing around the pregnant uterus with the largest abdominal pad. (c) Incision of the uterus with the invasion involving the fundus, and extended one-third of its extent along the anterior surface. (d) The delivery of the baby and placenta. These four steps can, of course, be accomplished in less than one minute, two minutes being abundant time for any qualified operator. (e) The rest of the operation merely includes the surgical steps toward closing the incision of the uterine wall, and of the abdominal incision. (f) The insertion of a large drainage tube into the cervix from below: The care of the baby being wholly delegated to other experienced hands.

In referring to accuracy and promptness in this somewhat dramatic operation, we particularly wish to council against any form of lecturing during the operation, or of a discussion of the principles underlying the operation, as well as of the conditions making it necessary in the individual case, while the patient is under an anesthetic, for the reason that not one more inspiration of ether or gas should be employed than is necessary for the proper execution of this important surgical procedure; because the blood of two lives is undergoing important changes at that critical moment—a scholarly recital of facts is illy timed and dangerous.

Team work so fundamental in surgery is appealingly so in a Caesarean operation. No exigency should in the slightest way disconcert the dual responsibilities in this procedure. A clinical experience may illustrate the unexpected.

A case of pregnancy apparently at full term was brought to the writers service about three years ago; the woman having been ill for a week, but without medical attention, until the previous day. She was unconscious, and had been for about six hours; the surface of the body was cold; she was cyanotic, pulseless, and breathed noisily. There was no urine in the bladder; in the brief examination by the attending physician and the writer, a diagnosis of twins was made.

The interne who was appointed temporary receiver for the supposed twins, was slightly disquieted when a third, and, unannounced offspring was placed in his blanket-covered forearms, and for a few seconds there was a color of disturbance in the organization.

To elaborate, nothing should be regarded as unexpected in surgical procedure, however emergent.

The mother continued to breathe for some four hours but did not respond to any efforts toward reclaiming her life. The babies thrived during the first two and a half months of their lives, during which time they were kept in the hospital. Following this, they were distributed among relatives at distant points, and no further record is known.

## CASE REPORTS.

### Report of Intracranial Growths.

H. B. Lemere, M. D., Omaha.

During the past year we have had under observation five cases of intracranial growth. These cases were all brought to us with one exception when they were blind either in one or both eyes. This one exception did not develop any very definite signs of intracranial involvement until a large glio sarcoma suddenly caused pressure on respiratory and circulatory centers. An operation was only performed as a forlorn hope. These cases were all seen at too advanced a stage to get good results but are reported with the idea of encouraging an earlier diagnosis and earlier operation. In two of our cases we were able to localize the tumor absolutely.

Case I. A hypophysial tumor. This was a well marked case. Patient was six feet six and one-half inches tall, hand- and feet were large but symmetrical. There was total blindness with optic atrophy. Operation was decided on to relieve persistent headache and no hope was given for the restoration of sight. A sella decompression was done through the nose with the patient under rectal anaesthesia. There was absolutely no reaction and report by letter six months later was that the headaches were relieved and enough vision was present to detect large objects, such as a post, a coat hanging up, etc.

Case 2. A woman aged 28 brought to us on account of defective vision. The right eye was blind, the left had 20/40 vision. There was double choked disk. The tumor was localized as probably tempero-sphenoidal and in order to save the vision of the left eye a subtemporal decompression was performed. The temporal muscle failed to restrain the intracranial pressure and a hernia developed beneath the scalp. The scalp remained intact however. Report eighteen months later is that patient has been attending to her housework and still retains her vision. The hernia is however increasing and patient refuses any further operation.

Case 3. A young man complaining of headaches.

Refractive conditions were corrected and nasal trouble eliminated. The fundus was normal. The headaches continued with however no other symptom of intracranial involvement, when suddently the respiratory and circulatory centers became very greatly embarrassed. A decompression was performed without any relief and the patient died. Autopsy showed glio-sarcoma of the cerebellum.

Case 4. Man 42, packing house laborer was brought to us blind in the left eye and could only see shadows with his right. He had a previous history of syphilis but Wassermann of the blood now showed negative. There was double choked disk. This case showed area of bone softening in the X-ray and a diagnosis was made of sarcoma of left temporal sphenoidal region. A decompression was performed first on the right side to relieve the severe intracranial pressure. In a week the site of the tumor was exposed and a large part of the tumor removed. The patient died a few days after with cerebral softening. Autopsy showed primary healing at site of both wounds. No meningitis but large sarcoma which had been partly removed at operation.

Case 5. Child 10 years brought to us totally blind. Double choked disk. History of vomiting and headaches past four months. The desperate condition of patient was explained to parents but at request decompression was done to restore sight if possible. The nerve heads subsided but no vision returned, the optic nerves showing white atrophy. The patient died three months later. Autopsy showed cyst of the cerebellum producing internal hydrocephalus.

We did what we considered indicated after a thorough consideration of each case, and after explaining the unfavorable prognosis. We were requested in each instance to give what relief it was possible to afford in the desperate condition of these patients, mentally rapidly failing and vision practically gone, or disappearing. It is to be hoped that as more cases are reported in the general literature, the symptoms of headache, nystagmus, and vomiting will arouse suspicion on the part of the attending physician, and when they do not yield to a prompt purge and dietetics, valuable time will not be lost in arriving at an early diagnosis at least before the vision is gone. Persistent vomiting without any definite known cause should always call for an examination of the optic nerve, both with the ophthalmoscope and also functionally, to determine if there exists intracranial pressure. The period of vomiting does not always persist, but subsides as the brain adjusts itself to the increased pressure. This is not to be taken as a sign that the intracranial pressure has subsided. The destruction caused by the increased pressure continues even though the vomiting and headache temporarily subside.

Spiller (1) reports a rapid development of choked disk in a glioma of the pons. On March 21 there was normal eye grounds, on April 6 the nasal side of each disc began to be elevated, on April 13 papillo-edema of 7 diopters elevated was in evidence and April 18, 10 d, then death occurred May 4th. The ophthalmoscopic findings were by Dr. Thoringten. Tooth (2) reports 500 brain tumors which came under observation in the National Hospital in London for ten years and concludes that in the present state of our knowledge we must be content with relieving pressure by decompression in all gliomata lest worst befall. Harvey Cushing (3) quotes Kuttner. "The relief afforded by a well conducted decompression in the case of a tumor which occupies a relatively mute area, may be as great and as enduring as when a growth is actually removed from a part of the brain of greater importance to the individual."

In our cases, 1 and 2 were distinctly benefitted and their lives probably prolonged. In cases 3, 4, 5 the condition proved too far advanced to be relieved by the operation. In no case was life shortened by the operation, and the patients were given every possible chance.

### References.

1. Spiller, A. M. A. Journal, Vol. L. IV, No. 25.
2. Tooth, Brain, Vol. XXXV, Nov.
3. Cushing, A. M. A., Vol. L, XIV, No. 3.

---

## Dyspituitarism.

Olga Stastny, M. D., Omaha.

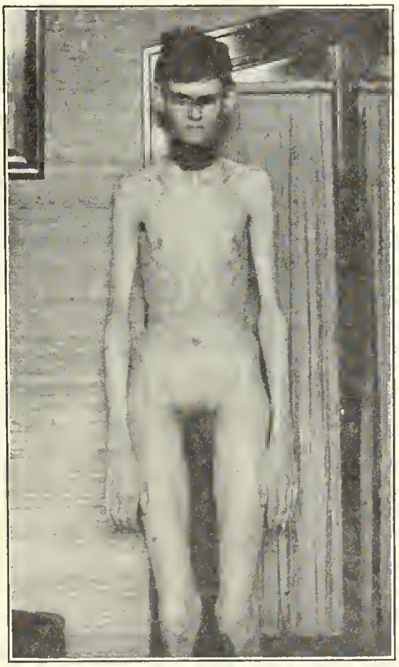
J. K. Age 19, height 6 ft. 5 inches, weight 108.

Family history: Oldest child in the family. Both families of father and mother are of average height. Mother has ankylosed hip which she claims is due to tuberculosis after injury in childhood. Otherwise family history negative. One brother and two sisters normal size and well.

Childhood history: Patient was healthy breast fed infant. Diseases: Whooping cough at two years. Began to go to school at five. Teachers remarked about his aptness for mental arithmetic. Statement of parents leads one to think that if anything the child was in his early years abnormally bright. Has never had any accident. Has always had to work a great deal harder than a growing child should. Kept out of school after twelve and put at heavy farm labor.

Present trouble: First symptoms noted about one and one-half to two years ago. Excessive growth, failing appetite and complaining of general muscular weakness. Mother attributed this to the boy's having to work so hard. At this time patient began to be very much constipated. Family noticed slight hesitancy in speech and a sort of mental dullness. At times patient was very nervous and fidgety. April of 1917, had smallpox, average case. Since then the symptoms of weakness and poor appetite have been even more evident and he has continuously lost in weight. Complained a great deal of the time of headache of frontol-parieta region and tenderness of the scalp. In November was sent to Mayo clinic at Rochester. Returned with diagnosis of tuberculosis of the left lobe of the thyroid with resulting thyroid deficiency, chronic constipation and anemia. Patient treated by his home physician with thyroid extract and grew steadily worse so this medication was stopped. Patient brought to Omaha January 12, 1918. Came to office complaining of great weakness, scarcely able to walk. Has suffered such extreme headaches and weakness that he had been in bed for several days. General appearance very poor, anemic and weak. Sent to hospital for observation.

Physical examination: General appearance weak and emaciated, feminine type of figure and feminine development of breasts. His height 6 ft. 5 inches, weight 108 lbs. Facies of degenerate type with hair extending down his forehead and back of neck. Absence of beard, absence of axillary hair, pubic hair of the mons veneris type. Dry skin, clubbed fingers, chest negative. Heart sounds weak with no evidence of organic disturbance. Long bones abnormal growth, seeming disproportionate to the other bones, although accurate measurements not taken. Patient responds very slowly, apparent difficulty in speaking. Temperature subnormal, slow pulse, varies from 40 to 60. Appetite very poor, patient insists that everything is salty causing him burning pain in his stomach. Sense of smell abnormally acute. Patient severely constipated often times obstipation. Complains of indefinite muscular pains, nervous and restless.



Clinical findings: Wassermann reaction negative. Sugar tolerance 200 grams. Urine, negative.

No blindness.

No evidence of choked disk. Enlarged veins of disk are such as are often seen in dark complexioned individuals. Eyes normal, movements unrestricted, pupils with normal reaction.

### Roentgen Findings.

The phalanges are very long and show characteristic striations of pituitary disease. Very long phalanges with clubbing at the distal end. The lower epiphyses of the radius and ulna are still unossified.

All sinuses are clear. The sella turcica measures 11 mm. vertically by 17 mm. anteroposterior. The posterior clinoid processes are normal. The anterior clinoid processes are eroded.

Diagnosis: A dyspituitarism with altered glandular activity.

January 20, 1918, patient put on regular diet, bitter extract of cascara and stanolax qs for thorough evacuation of bowels each day. Pituitary extract of the entire body, grain one, three times a day, dose to be gradually increased. Hygienic and dietary measures carefully observed. January 28, 1918, patient responds to treatment very favorably. Temperature practically normal, pulse 70 to 78. Complains not at all of muscular weakness, much less headache and says the abnormal saltiness of food is not disturbing him. Sleeps well and is developing a very good appetite. Bowels moving every day. Patient up and about several hours of the day, is much less irritable and nervous although often becoming depressed, this brought on by tendency to too much studying of his condition. On the whole the patient appears much happier with more intelligent look in his face. Glandular therapy to be continued as long as the present response is noticeable.

---

## A Case Report of Acute Cerebro-Spinal-Syphilis.

Geo. W. Covey, M. D., Lincoln.

### History and Physical Examination.

The patient, a man aged twenty-five, cashier in a bank, came in on February 20, 1917, with a chancre on the upper lip. He had injured the lip in playing football, and afterwards kissed a woman of questionable reputation.

Spirochetes were found in the serum exuding from the chancre. His temperature was about 100 to 101 degrees. Blood Wassermann, double plus positive. Urine contained a few casts hyalin and granular.

### Treatment.

He received during March and April six intravenous doses of salvarsan, 0.3, 0.3, 0.3, 0.6, 0.6, 0.6, gm. respectively, and was referred back to the family physician to receive intra-muscular injections of mercury salicylate each week for about three months.

After six of these mercury injections, he began to show signs of cerebral difficulty, in the form of epileptiform seizures, and came in again. We found that his seizures began on the left side, hand and face. Many of them did not become general. Occasionally, there was the Grand mal type. He had a constant and severe headache. He was slow of speech, hesitating about his words, and mentally somewhat dull. His left arm was slightly weaker than the right and his knee jerks exaggerated; otherwise the physical examination was negative, including the eye grounds. His urine contained a trace of albumin. His spinal fluid was clear, contained 94 cells, 93 per cent lymphocytes and 7 per cent polynuclears. Globulin plus, by Ross-Jones and Noguchi tests. Wassermann strongly plus; blood Wassermann weaker positive than previously, and weaker than spinal fluid. He was put to bed at the hospital June 29, 1917, on 60 grains of K. I., rapidly increased to 160 grains daily, and a daily rub of 2 grammes of mercury ointment. His symptoms rapidly cleared up, his mentality cleared and speech became normal and headache ceased. The only thing remaining was paraesthetic feeling of numbness in left side of face, tongue and left hand. No actual sensory disturbance could be determined.

The spinal fluid signs, however, remained positive, and on July 27th he was given salvarsan 0.6 grammes. Blood to the amount of 50 c.c. was drawn from the vein in 45 minutes. The serum was separated, centrifuged, diluted to 30 c.c. with normal salt and one-fiftieth grain of pure mercury bichloride added. This was injected intra-spinously, after withdrawing an equal amount of fluid. There was a moderate primary reaction consisting of an indescribable sensory affair in both legs and in the testicles. This cleared up in a few moments. In about three hours he had a secondary reaction, consisting of very severe headache, and the following morning there was pronounced stiffness of the neck muscles and tremor of the left hand. These things rapidly cleared up and he went home for ten days on K. I. and Hg.

On August 10th this was repeated with the same results. The spinal fluid withdrawn this time showed decrease in cells to 47, definite decrease in globulin, and weakly plus Wassermann.

On August 24th, spinal fluid 22 cells, faintest possible trace of globulin, and negative Wassermann. Blood Wassermann still faintly plus.

A month later he returned to work, still on 160 gr. K. I. and 2 grammes Hg. daily.

On October 19, 1917, spinal fluid under normal pressure 10 cells, faintest possible globulin by Ross-Jones. Negative Wassermann with ordinary antigen, slight fixation with cholesternized antigen. Blood Wassermann negative with ordinary antigen, frankly plus with cholesterin.

This man is not yet cured, but by catching him in the exudative stage of his cerebro-spinal infection he is greatly improved, and possibly saved from destructive lesions. Treatment is being continued vigorously, and if necessary he will receive further intra-spinous injections.

## Tuberculous Appendix.

Max Emmert, M. D., Omaha.

Mr. W. T. Age 22, married, a farmer.

Complaint: Pain in the right side of the abdomen.

Family history: His father died of tuberculosis. One brother is in California with pulmonary tuberculosis.

Personal history. The patient has had no serious illness. He has always been rather light in weight. and was rejected from the army because he was fifty pounds under weight. Height 5 ft. 11¾ inches. Weight 126 pounds. He always gains weight in the winter and loses some in the summer time. During the present winter he has not gained as much as usual. He attributed this fact to the increased amount of work which he has done. He has had a slight morning cough during the past year and raises a slight amount of yellow sputum, no blood.

Present illness: About ten months ago while in the west, he had a sudden attack of abdominal pain accompanied by nausea, vomiting, chills and fever. He was in bed for two days. The diagnosis at that time was appendicitis. Upon his return home last spring a roentgen examination was made of the lungs and a diagnosis of tuberculosis was made. He has had very little trouble with the abdominal pain until two months ago since which time he has had an occasional sharp pain in the region of the appendix. This pain is transitory but has been recurring frequently. Last November he had a slight diarrhea lasting two days. No blood was noted. The bowels move regularly and do not require cathartics. He has noticed that the cough is worse when the abdominal pain is present. He has noticed some jarring pain in the region of the appendix. The patient was married three weeks ago.

Examination: Temperature 100.2. Rather a frail looking man with fair color. Heart sounds soft but not rapid. Abdomen, no Rovsing sigh. Some tenderness and spasm over the appendix but it is not marked. The pain seems to extend toward the crest of the right iliac bone and behind the cecum. The urine is negative.

Operation: A right rectus incision was made, the muscle was rolled medianward. The omentum was not adherent. The appendix was retrocecal and congested. There was slight induration at the base of the appendix with marked induration at the ileocecal valve. At the terminal ileum there was an area of induration. The surface was roughened and whitish-gray in color surmounting which were numerous elevated hard areas the size of a pin head. From this area a line of these pin head points extended for about two inches towards the ileo-cecal valve. About four inches above the ileo-cecal valve is another area about one inch in diameter similar to the one described above. There was no evidence of peritoneal involvement of the cecum or of the parietal peritoneum. The appendix was congested, the middle third bulging and grayish white in color. There were a number of pin head areas over this bulging portion. On opening the appendix it was found to be full of white pus free from odor. The mucosa was denuded in a number of spots. The remaining mucosa was more or less undermined and was of a dead white color. There was no thickening of the walls. Subsequent examination of the sputum demonstrated the presence of tubercle bacilli.

Diagnosis: Tuberculosis of the appendix, ileocecal valve and terminal ileum.

Results: January 21st. Patient making a nice operative recovery. Temperature and pulse have been normal for several days. Stitches removed. Wound healed nicely.

## Tuberculous Meningitis.

Frank M. Conlin, M. D., Omaha.

H. W. Colored. Age 5. School boy. First seen October 12th.

Present illness: Has had fever for one week, slight headache not localized. Obstinately constipated for that period though ordinarily bowels moved regularly. Complains of feeling cold, no definite chill. Irritable first few days. Now lies in a semi-stuporous condition. Responds slowly to questions, has lost weight. Anorexia marked.

Previous history: Was in hospital two years ago for "convulsions." Tonsilitis repeatedly. Has lived in a low damp house.

Family history: Father gives symptoms of pulmonary tuberculosis but the tubercle bacillus has not been found in sputum.

Mother was sent to Denver for tuberculosis eight years ago. Gives no symptoms at this time.

Four brothers, all well. One later developed a miliary tuberculosis and died.

Two sisters, apparently well.

### Physical Examinatoin.

Fairly well nourished. Apathetic. Pulse 94. Temperature 101.4°. Pupils equally dilated, react to light and accommodation. Breath heavy, tongue markedly coated. Reflexes, negative. No evidence of paralysis at this time. Heart and lungs negative.

Abdomen, negative except for slightly tympany over colon. Spleen not palpable.

Urine, negative. Diazo, negative.

Blood, slight polymorphonuclear leucocytosis. Three Widal tests were negative. Would not permit a lumbar puncture to be made.

On October 20th developed ptosis of left upper lid and slight opisthotonos. Patient became progressively more apathetic and was removed to hospital on the 22nd. Had convulsion that evening and Cheyene Stokes breathing.

Examination of chest revealed rales on both sides, no dullness. Died Oct. 24.

### Post Mortem Examination.

The meninges at the base of the brain were studded with small tubercles. Over the Rolandic area on the left side was a closely adherent fibrinous exudate. Lungs showed a broncho-pneumonia and one small area of tuberculosis. Lymph glands of the masentery were enlarged and a few tubercules were found in the peritoneum.

This case clearly shows the four stages described by Traube.

First. The prodromal stage.

Second. The stage of irritation referred to the meninges and the cortex.

Third. The stage of pressure due to the ventricular effusion.

Fourth. The stage of relaxation and paralysis due to extension to the medulla oblongata.

It also illustrates the fact that tuberculous meningitis occurs usually as an early manifestation of a generalized tuberculosis and generally causes death before the lesions elsewhere in the body are far enough advanced to give definite signs or symptoms.

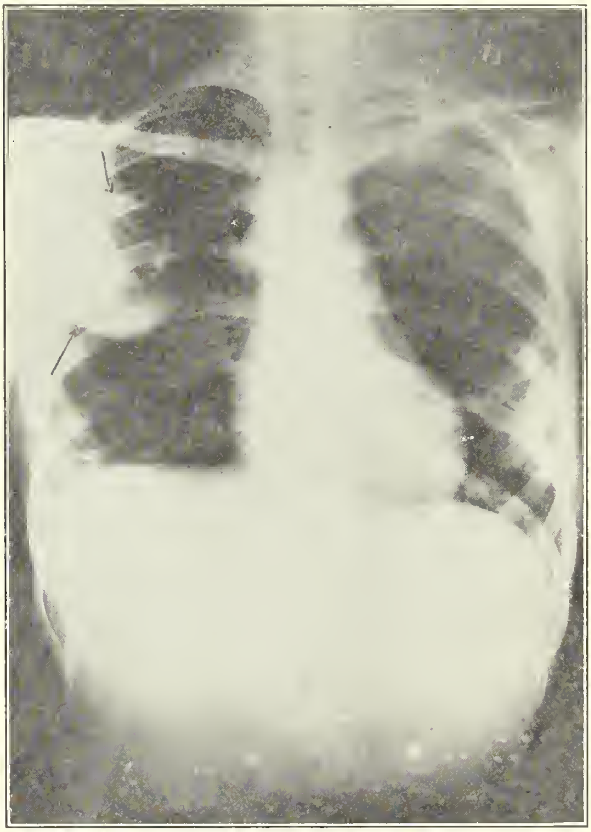
---

## Interlobar Empyema With Spontaneous Rupture.

LeRoy Crummer, M. D., Omaha.

The following case is of interest because of its infrequency and because of the subsequent history.

Miss E. H., twenty years of age came with the following history: She has had a cellulitis of the cheek with incision. This cellulitis followed a recent attack of boils at which time she ran a temperature of 100. Shortly thereafter she began coughing, she has been losing weight and carrying temperature. She has had night sweats for one week. Physical examination showed a temperature of 100. There was an area of dullness found in the right chest extending from the second rib to the third interspace. Roentgen examination revealed an area of consolidation in the right chest from the midclavicular line out toward the axilla, extending from the second rib to the middle of the third interspace. This area of consolidation was sharply marked off from the lung. Its borders were clear cut and it had the proper location for an interlobar empyema. There was no consolidation in the lung adjacent.



Diagnosis: Interlobar empyema.

Shortly after this examination the condition entirely changed. There was no evidence of any dullness in the area where dullness was previously very prominent. There was a pleural effusion in the right pleural sac with slight temperature. A day or two later, the dullness in the right lower chest was much less and in a few days it had entirely disappeared. During the time that dullness was present in the right lower chest, fluid was drawn off from the pleural cavity which revealed pus cells. At this time her white count was 16,300. This count gradually diminished to normal after the disappearance of the effusion in the right lower chest. Her cough has ceased and she has gained rapidly making a normal convalescence.

### Colon Bacillus Abscess of the Liver.

E. C. Henry, M. D., Omaha.

Mr. C. K. A soldier in training, age 26. Shortly after enlistment, while on a hike one day, he began to have intense backache which was confined to the right loin. The pain was so intense that he was compelled to drop out of line. The following day he was compelled to drop out again. In a few days he was sent to the hospital where they found he had a temperature and a slight cough. No definite diagnosis was made but he continued to run a fever and was not doing well. Shortly thereafter he was given a furlough and came home. Upon his arrival here he had a cough and a slight temperature. Moist rales were present throughout the right lung. No area of dullness was found. Physical examination at this time revealed intense tenderness under the right costal arch with the lower border of the liver extending three inches below the lower margin of the ribs. Upon compression of the right side, intense pain resulted. When the patient rolled over on the right side the liver would protrude farther beyond the costal margin than when on the back. The liver itself was very tender. The white cell count was 15,500. He had a negative von Pirquet and a negative Wassermann. A lateral incision was made in the abdomen and upon inspection a large abscess was disclosed in the substance of the liver showing on the superior surface. A small incision was made which was enlarged with a hemostat and about a pint of foul smelling pus came out. Under the microscope colon bacillus was found. Convalescence was slow but satisfactory with no complications.

This case is of extreme interest because of the rarity of colon bacillus abscess in the liver. Most of these abscesses are due to amoebae dysenteriae.

## Book Reviews.

**1916 Collected Papers of the Mayo Clinic,** Rochester, Minn. Octavo of 1014 pages, 411 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth $6.50 net.

This publication is one of the most important published in the English language. This volume contains one hundred contributions by forty-two authors of the Mayo Clinic. The material has been arranged under the following heads: alimentary canal, twenty-nine papers; urogenital organs, eighteen papers; ductless glands, fourteen papers; blood, six papers; head, trunk and extremities, fourteen papers; technique, six papers; general, eleven papers.

In reviewing this volume, one is impressed by the scientific care, as well as the clinical thoroughness with which each of the large range of subjects has been treated. The general practitioner, as well as the surgeon, will find a wealth of material that bears the imprint of long experience and earnest endeavor on part of the authors both medical and surgical, for this is no longer a collection of exclusively surgical topics.

The subjects are so numerous that a short review can but touch a few if more important ones The reviewer, at once, is confronted by the difficulty of singling out the leading ones for the merit of all papers is of a very high order.

In turning over the leaves of this book, one's attention is arrested by two papers by Edward Rosenow, one of the "Elective Localization of the Streptococcus from a Case of Pulpitis, Dental Neuritis and Myositis," and another entitled "The Causation of Gastric and Duodenal Ulcer by Streptococci." The first paper points out the probable causal relation between localized infections in or about the roots of teeth and the relationship to systemic disease and to neuralgia of the face. The second paper is an experimental study on the causation of gastric and duodenal ulcers. He has produced very strong evidence that "the necessary requirements have been fulfilled to warrant the conclusions that the usual ulcer of the stomach and of the duodenum is primarily due to a localized hematogenous infection of the mucous membrane by streptococci.

Rosenow contributes the following in addition, the "Elective Localization of Bacteria in Diseases of the Nervous System;" "The Etiology of Cholecystitis and Gall Stones and Their Production by the Intra Venous Injection of Bacteria." Then follows his most important work of the year on "Poliomyelitis" in collaboration with Towne and Wheeler, four papers, which should be read by every practitioner. These papers must be carefully studied in order to realize their importance. Then follows a series of subjects on affections of the stomach by Crispin, Carman, Mann, Eusterman, Broders and MacCarthy. Judd has an experimental study on "Removal of the Gall Bladder." He has another very practical paper on "Obstructing Enlargement of the Prostate." He also has a very instructive study on "Intra-canalicular Papilloma of the Breast."

Dr. Charles H. Mayo gives an excellent dissertation on "The Choice of Operative Procedure in Cancer of the Rectum and Pelvic

Colon". based on a wide personal experience. He also has nine other papers on various subjects.

Dr. William J. Mayo is represented by four papers treating the subject of "Splenectomy," "Cancer of the Rectum and Recto-sigmoid," "Cancer of the Second Half of the Large Intestine, not including the Rectum," "Removal of Stones from the Kidney," as is usual with him. These topics are excellently handled and represent the latest and best thought and methods.

Louis B. Wilson has shown his excellent capabilities by the treatment of the following, "Model of Gastric Tubules in Early Gastric Cancer," "The Pathologic Changes in the Sympathetic System of Goitre," "Suggestions Concerning Straining Methods used in the Study of Pathologic Lesions in the Sympathetic Ganglia." He collaborates with Luigi Durante and Thomas O. Young in their further studies in the nervous system of goitre. Edward C. Kendall contributes an experimental study on "The Active Constituent of the Thyroid, its "Isolation, Chemical Nature and Physiologic Action." Alpha iodin, a chemical body that he has isolated and with which he has treated a number of cases of Cretanism and Myxedema with excellent results.

The Mayo laboratory workers have shown unusual activities as is shown by fourteen papers dealing with "Ductless Glands," and seven relating to "Problems of the Blood," all of these deserve a careful study. It is impossible, in this short review, to more than hint at the leading topics. The large material of the Mayo Clinic has been well handled and has been presented in excellent form. Too much cannot be said in praise of the present volume.

A. F. J.

**The Roentgen Diagnosis of Diseases of the Alimentary Canal.** By Russell D. Carman, M. D., Head of Section on Roentgenology, Division of Medicine, Mayo Clinic and Albert Miller, M. D., First Assistant in Roentgenology at the Mayo Clinic. Octavo, 558 pages with 504 original illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth $6.00 net.

This is an extremely valuable addition to the roentgen literature and should be in the library of every physician and roentgenologist.

The authors have had a wide experience in gastro-intestinal work and it is well reflected in this volume. Numerous illustrations enhance the text giving one a broader view of the subject.

This is one of the first books of its kind to appear in America as previously the literature on this subject has been widely scattered. A full chapter is given on each disease affecting the alimentary tract, that may be profitably studied roentgenologically. Its arrangement of text and radiograms make it especially valuable as a work of reference. No attempt is seen in this work to divorce roentgen findings from the clinical examination; also one is not given the idea that roentgenology is the short cut to all diagnosis.

The book should appeal to the surgeon and internist as well as to one limiting himself to X-ray work. Its careful study will do much toward illuminating snap shot diagnosis and also toward reducing the number of exploratory operations now performed. The recognition of the importance the roentgen ray has recently gained as an aid in gastro-intestinal work will be greatly enhanced by this volume.

C. H. B.

**Roentgen Technic (Diagnostic).** By Norman C. Prince, M. D., Attending Roentgenologist to the Omaha Free Dispensary for Children; Associate Roentgenologist to the Douglas County Hospital, Bishop Clarkson Memorial Hospital, Swedish Immanuel Hospital, St. Joseph's Hospital and Ford Hospital, Omaha, Nebraska. Seventy-one original illustrations. C. V. Mosby Company, St. Louis, Missouri. Price $2.00.

This volume is quite complete and covers the subject of technique in an efficient manner. It offers nothing untried or unusual but gives one a good survey of up to date methods of use to the roentgen worker.

Being especially written for the general practitioner and beginner in radiology it should find a warm reception and accomplish much good in correctly starting him along a well beaten path. The different sections are copiously and well illustrated bringing out essential points in the text.

The section on stereoscopic work might well have been given in more detail.

The book will do much toward stimulating the beginner to do more scientific work.

C. H. B.

**Diseases of the Skin.** By Richard L. Sutton, M. D., Professor of Diseases of the Skin, University of Kansas School of Medicine; Former Chairman of the Dermatological Section of the American Medical Association; Member American Dermatological Association;

Assistant Surgeon, United States Navy, Retired; Dermatologist to the Christian Church Hospital. Second Edition, Revised and Enlarged. C. V. Mosby Company, 1917. St. Louis. $6.50.

Dr. Sutton has very ably presented the subject of dermatology in a clear and concise way, avoiding detail in those subjects of relatively minor importance and placing increased stress on the more common diseases, notably syphilis.

The pathology of the different dermatoses is particularly well given and is in many instances accompanied by one or more photomicrographs.

Special attention is also given to treatment and in this the author has very largely confined his remarks to those therapeutic measures whose worth he has personally proven. The book is exceptionally well supplied with clear cut illustrations, there being 833 text illustrations and eight colored plates.

C. C. T.

---

Practical Treatment, Volume IV. By 76 eminent specialists. Edited by John H. Musser, Jr., M. D., Associate in Medicine, University of Pennsylvania; and Thomas C. Kelly, M. D., Instructor in University of Pennsylvania. Desk Index to the complete set of four volumes sent with this volume. Octavo 1000 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $7.00 net.

Newest Treatment is the appropriate title of the fourth volume of Musser and Kelly's Practical Treatment The original authors now living have done their bit to bring their subjects up to date. It covers more than mere treatment for it embodies the newer diagnostic methods which must necessarily precede the rational treatment of diseases.

In this volume Sir Clifford Allbutt epitomizes in a few pages his great work on Vascular diseases and Angina Pectoris; Sippy gives the latest details of his valuable treatment for gastric and duodenal ulcer; Rowntree goes over the whole field of diagnosis and treatment of the various nephritides and nephroses, paying special attention to the vascular side and the terminal myocardial insufficiency; Dochez fully explains the specific chemotherapy and the serum treatment of pneumococcus infections; Otis of Boston takes up tuberculosis and artificial pneumothorax; roentgen ray and radium therapy are fully covered; Goldthwaite gives the details of his postural treatment of sacro iliac strain and visceral displacements. We cannot mention all the contributors, but it will suffice to say that from the anaemias and transfusion of blood to spinal cord diseases and intra-thecal therapy the treatment of disease is fully covered.

An index of seventy-seven pages with nine hundred and thirty-two pages of text, renders all the subject matter easily available. This volume deserves a wide circulation and should be sold separately, that its usefulness may not be limited to owners of the original three volumes.

A. K. D.

---

**Poliomyelitis in all its Aspects** by John Ruhrah, Professor of Pediatrics in University of Maryland and Erwin E. Mayer, first lieutenant in the Medical Officers Reserve Corps, U. S. Army. 285 pages, illustrated. Phil. Lea & Febiger, 1917. Price $3.25.

In the preface, the authors state their purpose "to collect the various facts concerning poliomyelitis and to give briefly such theoretic considerations as may seem to be either of interest or importance."

There follows a short history of the disease, a brief resume of the pathology, an interesting chapter on "the nature of the virus," and a practical one on the epidemiology. They adopt with some modifications the classification of the New York Health Department. Either that of Krause or Holt and Howland would seem more simple. The chapters on symptoms, diagnosis, and treatment are in accordance with the views generally accepted at the present time.

The technic of lumbar puncture and examination of the cerebro-spinal fluid make up a necessary chapter in a monograph of this character. The authors state frankly that no drugs are of known value and that none of the sera have definitely justified their use as a specific.

As would be expected in a work of this kind the indications for orthopedic and operative treatment are given rather than the details of such treatment. The most valuable section of the book in the reviewers opinion is that contained in the forty-eight pages devoted to "examination of muscles and muscle training." This is clear, concise, and helpful, the illustrations are good and a working knowledge is furnished for this very important part of the treatment. Their recommendations for the conduct of a quarantine and its termination in a reasonable time (two to three weeks) are in accordance with common sense ideas and probably with the requirements of safety.

They protest against the use of the various aqueous antiseptic solutions, so commonly recommended as a preventive measure, as being not only of no value but possessing possibilities of harm.

The volume closes with a chapter containing figures and tables illustrating the various facts in the diagnosis and localization of nervous lesions which add to its completeness as a help in studying this disease.

In reviewing the book one would find little to dis-approve and much to commend. It is a valuable acquisition to the library of anyone who is interested in the subject of poliomyelitis. It presents in an interesting manner the now known facts and theories concerning this disease and thereby fulfills its purpose.

H. B. H.

---

**The Elements of the Science of Nutrition** by Graham Lusk, Ph. D., Sc. D., F. R. S. (Edin), Professor of Physiology at the Cornell University Medical College New York City. Third edition, reset. Philadelphia and London, W. B. Saunders Company, 1917. Price $4.50.

This book represents the matured views and in many instances the author's own results after a lifetime of work in this field. It has been frequently and favorably reviewed as a scientific production, and from this point of view there is only commendation to be said. The present review will therefore be directed towards pointing out the value of the book to the practitioner of medicine. While not written specifically for this purpose, an examination of its content for facts and discussions of practical medical value almost gives the impression that the material had been selected for its medical value. Here are fine chapters on protein, fat and carbohydrate metabolism, both the intermediary and the respiratory, also on nitrogen equilibrium, starvation, the regulation of temperature and other scientific topics. From chapters XII to XXI, however, we have a series of topics of intense practical interest to the physician, which cover the following subjects: A Normal Diet—The Nutritive Value of Various Materials Used as Foods—The Food Requirement During the Period of Growth—Metabolism in Anemia, at High Altitudes, in Myxedema and in Exophthalmic Goitre—Metabolism in Diabetes and in Phosphorus-Poisoning—Metabolism in Nephritis, in Cardiac Disease, and in Other Cases Involving Acidosis—Metabolism in Fever—Purin Metabolism, Gout—The Influence of Certain Drugs Upon Metabolism—Food Economics. These are topics that confront the physician in his cases every day. They are here treated in an exceedingly clear and instructive way. To the physician who desires a presentation of principles, whose points of application in practice are numerous, the present volume can be heartily recommended.

A. W. P.

---

**Food for the Sick**—A manual for physician and patient. By Solomon Strouse, M. D., Associate Attending Physician, the Michael Reese Hospital; Professor of Medicine at the Post-Graduate School Chicago, and Maude A. Perry, Dietition at the Michael Reese Hospital, Chicago. 12 mo., 270 pages. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $1.50 net.

The co-authors of "Food for the Sick" state as their conceptions behind this book:

First: "That the patient may justly demand more explicit instruction in diet than he has hitherto received."

Second: "The physician needs a practical guide book for imparting such instructions, especially when the patient must rely on himself or his family for the preparation of his diet."

To supply these needs the authors give the normal use of food, its classification, individual food requirements and caloric values. In providing diet in disease, each disease is taken up so as to give the patient a definite knowledge of the diet required and also the reasons for such diet.

An attempt has been made to phrase the book, again quoting the authors, "in terms of the kitchen" rather than in "terms of the laboratory." The difficulty arises in dietetics not being a kitchen subject. However, if we pre-suppose a patient above the average intelligence, "Food for the Sick" will undoubtedly accomplish its aim of educating the patient to be an assistant to the physician.

G. B.

---

**Diseases of the Skin.** New (8th) Edition, Revised. A Treatise on **Diseases of the Skin.** For the use of advanced Students and Practitioners. By Henry Stelwagon, M. D., Pr. D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Eighth edition, thoroughly revised. Octavo of 1309 pages, with 356 text-illustrations, and 33 full-page colored and half-tone plates. Philadelphia: W. B. Saunders Company, 1916. Cloth, $6.50 net.

No better evidence of value is needed than the fact that this work has come to an eighth edition since it was first published in 1902. The author has very successfully endeavored to present the subject of dermatology in a practical and complete way. The various subjects are arranged in an orderly manner with special attention given to those parts of chief interest to the general practitioner i. e., symptomatology, diagnosis, and treatment. Several new subjects have been added and others either revised or fully discussed. Numerous references to the literature are conveniently placed as foot-notes rather than at the end of the chapter. The book contains 356 text-illustrations and 33 colored or half tone plates.

C. C. T.

---

By Henry Foster Lewis, A. B., M. D. Professor of Obstetrics and Gyneocology, Loyola University School of Medicine; and Alfred deRoulet, B. Sc. M. S., M. D., Professor of Gyneocology, Loyola University School of

Medicine; illustrated. Published by C. V. Mosby & Company, St. Louis. Price $4.00.

This work is exceedingly comprehensive, although thoroughly within the limitations of its title. The subject matter is systematically arranged, well written, and concisely presented. It is pleasing to know that though briefly presented, the physiology of the female generative organs is based for the most part on the modern conceptions.

The pathology of the various organs receive adequate attention both as to description and illustration. The original illustrations however, are only fair.

C. H. W.

### Diseases of Women.

By Harry Sturgeon Crossen, M. D., F. A. C. S. Associate in Gyneocology, Washington Medical School, Associate Gyneocologist at Barnes Hospital, Gyneocologist to St. Lukes Hospital, Fellow American Gyneocological Society and American Association of Obstetricians and Gyneocologists. Fourth edition. Illustrated. C. V. Mosby Co., St. Louis. Price $6.00.

The fourth edition of this well known book is enhanced by the addition of numerous new illustrations and the incorporation of a valuable chapter on the internal secretion of the ovary and the interrelation of the endocrin system. This chapter has been contributed by Dr. Hugo Ehrenfest.

The revision of the text was made largely by Dr. Ehrenfest, as Dr. Crossen was called to active duty in the Medical Reserve Corps, soon after the revision was undertaken. In general, but slight alterations have been made in the excellent arrangement of the subject matter. The more noticeable changes have been made in regard to recent advances in physiology and pathology.

The chapters dealing with the gyneocological diagnosis do so in a way admirably adapted to student use. From the student point of pathology, both gross and hystological the well chosen and for the most part excellent illustrations add materially to the value of this text.

C. H. W.

## SOCIETY NOTES.

The Douglas County Medical Society elected the following delegates to the State Medical Association: Drs. B. W. Christie, R. A. Dodge, A. F. Tyler, L. B. Bushman and A. P. Overgaard.

### COUNTY SOCIETY NOTES.

The Loup Valley Medical Society at a meeting held January 8th in St. Paul elected the following officers:

Dr. Edward Dodd, Boelus, president.

Dr. Adolph H. Holm, Wolbach, secretary-treasurer.

A new fee bill was drawn which contained an advance in fees. The advisability of forming a county board of health was discussed and brought to the attention of the board of county commissioners.

Thayer County Medical Society met at the court house in Hebron on December 6th, and elected the following officers: Dr. Herney of Deshler, president; Dr. Statton of Chester, vice president; Dr. Platt of Hebron, secretary and treasurer; Dr. Saylor of Brunning and Dr. Wilcox of Hubbell, censors. Routine business was transacted.

### County Societies Whose 1918 Dues in State Association Were Paid January 1, 1918.

Custer
Merrick
Cedar-Dakota-Dixon
Thurston-Wayne
Chase-Dundy-Hayes
Hitchcock
Holt
Boyd
Saunders
Seward
Pierce
Fillmore
Hall
Adams
Platte
York
Washington
Webster
Phelps
Douglas-Sarpy
Johnson
Scottsbluff
Madison
Clay
Boyd
Thayer
Saunders

The attention of all County Secretaries is called to the following action by our House of Delegates at the May, 1917, Annual Session:

"Chapter 12. (By-Laws). Assessments and

Expenditures.

Section 1. An assessment of four dollars per capita on the membership of the competent societies is hereby made the annual dues of this Association. The secretary of each county society shall forward its assessment, together with its roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county, to the secretary of this Association, on or before December 31st of each year.

Section 2. Any county society which fails to pay its assessment ,or make the report required on or before the date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met."

The twenty-second mid-winter meeting of the Elkhorn Valley Medical Society was held at Fremont January 10th. The weather was very severe but in spite of the fact there was an attendance of twenty-five. The program was very interesting and the fellowship especially appreciated.

Dr. J. Stanley Welch of Lincoln gave a discussion of early recognition of cancer of the breast, while Dr. Palmer Findley of Omaha discussed the best method of early recognition of cancer of the uterus. Dr. Howard B. Hamilton of Omaha gave a most interesting paper on "Empyema in Children." Dr.

Frank Conlin's paper on "Tuberculous Meningitis" proved exceedingly interesting. Major A. C. Stokes gave a talk about the relationship of the Red Cross to the present war, giving in detail the scope of work covered by the Red Cross. This was highly entertaining and instructive and he brought out the fact that the Red Cross was not only instrumental in equipping fifty base hospitals to do service in the war zone but also has equipped a number of ambulance companies, sanitary units for cleaning up cities in which soldiers are in camp and are carrying on work in a large number of cities for surgical dressings for wounded men as well as garments for men in active service. He reported carloads of dressings have been shipped from Nebraska for use across the water. Another phase not usually recorded is that the Red Cross takes care of the families of enlisted men scattered throughout every city in the country. There has, in the past, been criticism of the Red Cross which we feel is entirely uncalled for. It has been rumored that soldiers were compelled to buy the sweaters which the Red Cross furnished. In every instance where such a rumor was reported it was found to be foundationless so Major Stokes makes a standing offer of a liberal reward for anyone who will prove that such a condition exists at any time.

Dr. Andrew Harvey of Fremont gave a paper on "New Growths in the Lung." Dr. A. F. Tyler of Omaha gave a paper on "The Roentgen Ray Treatment in Malignancy."

Officers were elected as follows: John D. Reid, Pilger, Nebraska, president; Dr. H. N. Morrow, Fremont and Dr. Hardy A. Skelton, Spencer, Nebraska, vice presidents; Dr. A. P. Overgaard, Omaha, secretary; Dr. S. A. Preston, Fremont, treasurer. It was decided to hold the annual meeting at Norfolk, Nebraska, next summer.

## NOTES.

Dr. Montgomery of Stella was a recent visitor in Omaha.

Dr. Plehn of Scottsbluff spent a few days in Omaha recently.

Nebraska City has a shortage of physicians on account of the war.

Dr. R. H. Sawyer of Lincoln who has been county physician for the past two years has been reelected.

Dr. C. H. Ballard and Dr. T. T. Harris of Omaha, recently attended a meeting of the Western Roentgen Society held in Chicago.

Dr. E. L. Bridges of Omaha, has received his commission as major and will be chief physician to Red Cross Base Hospital Unit No. 49.

Dr. C. A. Hull of Omaha has received his commission as major in the Medical Reserve Corps and is surgeon to base hospital unit No. 49.

Dr. E. W. Rowe and Dr. R. L. Smith of Lincoln attended the meeting of the Western Roentgen Society held in Chicago the latter part of January.

Dr. E. W. Rowe of Lincoln, has received his commission as captain and will be in charge of the Roentgen division of Red Cross Hospital Unit No. 49.

Dr. F. E. Coulter went to California the first of the month where he was invited to deliver a course of lectures at the University of Southern California Medical School.

The many friends of Dr. D. C. Bryant, formerly of Omaha, will be interested to know that Mrs. Bryant is improving following her recent attack of hemiplegia.

The Douglas County Medical Society hung their service flag at a recent meeting. There are already forty-four stars on this flag with the prospect of several more being added within the near future.

The state board of control has accepted plans for a new hospital for the State Industrial School at Kearney. The hospital will cost approximately $15,000 and work will begin as soon as the weather will permit.

Miss Florence McCabe of Chicago has recently accepted the position as superintendent of the Visiting Nurses' Association in Omaha. Miss McCabe is a graduate of St. Luke's hospital and of the School of Civics and Philanthropy, Chicago.

Dr. A. C. Stokes recently returned from Washington, D. C., where he was called on account of business connected with the Base Hospital No. 49. It is his opinion that this hospital unit will be called into active service within the next few weeks.

The Lincoln Hospital Association organized some six years ago for the purpose of accumulating funds for the construction of a hospital for the city of Lincoln now has in the treasury a total of $4,816. Prominent Lincoln people are members of the directorate and the city of Lincoln may look forward to a successful conclusion of the enterprise.

Dr. J. B. Potts of Omaha who was recently commissioned captain in the Medical Reserve Corps of the United States Army, has been assigned to active service and transferred to Ft. Shelby, Mississippi. He will devote his time to head surgery and will later join the University of Nebraska Red Cross Base Hospital Unit No. 49 which has been organized and which expects to be called to active duty in a very short time.

The Nebraska Association of Nurses has divided the state into three districts. The third district, comprising Lancaster and sixteen other counties in the southeastern part of the state has organized and elected the following officers:

Miss Margaret McGreevie, president.
Miss Emma Schrader, vice president.
Miss French, secretary.
Miss Ruth Farmer, treasurer.
Mrs. Lockwood, Mrs. Taylor and Mrs. Marnell, trustees.

## MILITARY NOTES.

Dr. Stewart Bell of York who enlisted in the medical corps is stationed at Fort Riley.

Dr. W. E. Mogan of Petersburg has received his commission in the Medical Reserve Corps.

Dr. E. W. Fetter of North Platte received his commission in the M. R. C., and is stationed at Fort Riley.

Dr. J. S. Simms of North Platte has applied for a commission in the medical reserve corps of the army.

Lieutenant J. A. Peters of Papillion has been assigned to duty as sanitary inspector of Camp Lee, Virginia.

Dr. J. Harvey Mettlen of Bloomfield who received his commission in the army is now stationed at San Antonio.

Dr. Blake Boyden of Grand Island has received his commission as first lieutenant in the medical corps of the army.

Dr. Delmer L. Davis of Omaha has been ordered to report February 1st to Fort Lyon where he will serve as an assistant surgeon.

Dr. C. C. Johnson, formerly of Creighton and now with the 342d Field Artillery at Camp Funston has been promoted from lieutenant to captain.

## RECOMMENDED FOR COMMISSIONS.

**Supplementary List Nov. 15 to Dec. 15, Incl.**

Hiram Henry Avery, 1416 4th St., Florence, 1st Lieut.
Neill J. Everett, St. Joseph's Hosp., Omaha, 1st Lieut.
August Frederick Jonas, Brandeis Building, Omaha, ..........1st Lieut.
John Beekman Potts, 567 Brandeis Building, Omaha .......... Captain
Joseph Philip Swoboda, St. Joseph's Hospital, Omaha ..........1st Lieut.
William Edward Mogan, Petersburg..........1st Lieut.
Victor Lamont Siman, Winside..........1st Lieut.

## MARRIAGES.

The marriage of Miss Nellie Luton of Elmcreek to Dr. George J. Hand of Alliance took place December 31, 1917.

Miss Gladys Baker, daughter of Mr. and Mrs. Lee Baker, was married to Dr. Edwin J. Oxford. Both are residents of Chambers, Nebraska.

Miss Leila Conkling of Franklin and Dr. A. L. Marsteller of Wilcox were married at the home of the bride January 16, 1918. They will reside in Wilcox.

Mr. and Mrs. John Van de Wall announce the marriage of their daughter Hilda to Dr. William W. Walvoord on December 20th at Cedar Grove, Wisconsin. Dr. Walvoord is a graduate of the University of Nebraska College of Medicine.

The marriage of Miss Ethel J. Dixon, daughter of William C. Dixon of St. Louis, Missouri, to Lieut. William L. Ross, jr., United States medical reserve corps, took place recently at Hempstead, L. I. Lieutenant and Mrs. Ross will be at home at Garden City, L. I., until Lieutenant Ross is sent abroad. He has been assigned to the medical department of the aviation corps.

## NECROLOGY.

Dr. Redington Stanhope, one of Lincoln's pioneer physicians, died at his home January 19, 1918, at the age of eighty-one years. He was born in Madison, Ohio, and resided in Cleveland, Ohio, until 1882 when he came to Nebraska and located in Lincoln. He received his medical degree from Western Reserve Medical School.

## ABSTRACTS.

Presidential Address by Charles G. Wagner, M. D., Medical Superintendent Binghampton State Hospital, N. Y., delivered at the seventy-third annual meeting of the American Medico-Phychological Association, New York, May 29, 30, 31, June 1, 1917. The entire address is published in The American Journal of Insanity, Vol. 74, No. 1, July, 1917.

The following excerpt from the address on the status of psychoanalysis in the medical profession, will clear that subject in the minds of many, looking from the point of view of its utility and adaptability in the practice of medicine:

"In these days, 'when much wild doctrine, especially as to mental therapeutics, is being offered the public,' I cannot avoid a growing scepticism as to the value of certain new procedures that have come into prominence during the past few days, commonly referred to as the psychoanalytic movement, introduced into this country by Freud and Jung in 1909. The exponents of this movement are active in the dissemination of its propaganda. A journal devoted exclusively to its exploitation is now published: its articles are usually entertaining, but frequently clouded by what Dr. Dana calls 'an extraordinary clutter of terms' many of them newly coined for this special circulation and the cases reported are often of such picturesque and dubious character, so indefinite and nebulous in their portrayal as to warrant their classification in the realm of fancy rather than fact, and to remove them from the domain of science to that of imaginative literature.

"To the psychoanalyst the key to every mental state, normal or morbid, is sexuality. However pure, innocent and free from sexual coloring our ideas may appear to be this appearance is delusive, for they are in reality steeped and saturated with sexuality. This condition is not only traceable to early childhood, but the psychoanalyst is even able to invade the period of intra-uterine life and to find there the prototype of adult fears in the fright the unborn infant experienced while passing through the pelvis of its mother. Similarly the infant obeys an incestuous impulse when he kneads with his little hands his mother's breast and flings himself greedily on the nipple.

"Much confusion in this new psychology seems to have resulted from dissensions 'amongst the leaders themselves, so that there now exist two schools,' 'referred to in the literature as the Vienna school and the Zurich school,' (7) of these the Vienna following seems to be the larger in this country. Freud is usually credited with the parentage of the psychoanalytic movement, notwithstanding the earlier activities of Janet and Breuer, neither of whom seems to have been sufficiently impressed by his achievements to assert a claim to priority. In dilating upon his power to 'translate dreams,' Freud is so confident of his ability to correctly interpret their meaning that he has only pity for the benumbed intellect that cannot follow his alert reasoning and discern with equal certainty the meaning of their symbolism.

"In this connection it is interesting to note Freud's attitude toward the unbeliever: he says, 'I have acquired the habit of measuring the grasp of a psychological worker by his attitude to the problem of dreams interpretation, and I have noticed with satisfaction that most of the opponents of psychoanalysis avoided this field altogether, or, if they ventured into it, they behaved most awkwardly.' (8) Nothing seems to be more conspicuous in the attitude of the master psychoanalyst than his self-satisfied complacency.

"Abroad, psychoanalysis does not appear to have established a secure footing. Freud himself states that 'France has so far shown herself the least receptive toward this movement,' and 'in England interest has developed very slowly.' The standing of psychoanalysis in Germany, says Freud, 'can be described in no other way than to state that it is the cynosure of all scientific discussion and evokes from physicians as well as from the laity, opinions of decided rejection, which, so far, have not come to an end, but, on the contrary, are constantly renewed and strengthened.' 'No official seat of learning has, so far, admitted psychoanalysis.' 'Italy, after many promising starts, ceased to take further interest.' 'And Vienna,' says Freud, 'has done everything possible to deny her share in its origin. Nowhere else is the inimical indifference of the learned and cultured circles so clearly evident to the psychoanalyst.' To Janet, 'the assertion that the neuroses can be traced back to disturbances in the sexual life, could only have originated in a city like Vienna, in an atmosphere of sensuality and immorality not to be found in better cities, and it thus represents only a reflection, the theoretical projection, as it were, of these particular Viennese conditions.'

"Delage, of France, recently the recipient of a very high honor in England—the Darwin medal—by the Royal Society, says of the psychoanalysts: 'These men are the sincere and unhappy victims of a lamentable misapprehension; they have applied to the human individual the psychology of the inhabitants of the moon, such as some shrewd Cyrano on returning from a pretended voyage to our satellite might have imagined, in order to make it as different as possible from terrestrial realities. (9)

"After somewhat extended reading of the psychoanalytic literature with a sincere desire to separate the wheat from the chaff, I am constrained to agree in considerable measure with Dr. Dercum, that it is a matter for profound regret 'that at a time when psychiatry is beginning to unfold a practically limitless field for actual scientific research, men should be found willing to devote themselves to a cult, to an ism, which, like a salted mine, returns to the investigator only that which he himself puts into it.' 'How much more inspiring it would be to know that they were at work upon the biochemical problems confronting them today at every step, problems of auto-intoxication, of the toxicity of the sera and secretions, the doctrine of the leucomaines, the problems of metabolism in the heboid-paranoid group and in manic-depressive insanity and in epilepsy, the problems presented by the biochemistry of the blood, of the cerebrospinal fluid, the suggestive parallelism between auto-intoxication and recovery in the insane one the one hand, and Ehrlich's theory of infection and immunity on the other, and further, the whole world of serological problems now opening up, not to mention the ever widening role of the internal secretions." (10)

(6). Jung, C. G., Psýchology of the Unconscious, English translation, New York, 1916.

(7). Jung, C. G., Psychology of the Unconscious, New York, 1916.

(8). History of the Psychoanalytic Movement, by Prof. Sigmund Freud, Vienna. Translated by A. A. Brill, New York, 1917.

(9). Psychoanalysis, a New Problem, by Dr. Yves Delage, Journal of Mental Science, London, January, 1917.

(10). Dercum, F. X., M. D., Transactions American Medico-Psychological Association, Vol. 21, p 319.

### The Conservative Treatment of Eclampsia.

Ross McPherson, M. D., New York.

"An arrangement was made whereby all cases of convulsive toxemia occurring in the wards of the First Division of the New York Lying-in Hospital were assigned to the author for care, and the results were carefully noted. Since this time there have occurred thirty-five cases of convulsive toxemia, in all of whom the treatment later to be described was administered. Of these thirty-three mothers were discharged from the hospital well, fifteen children were born alive and were discharged well, fourteen children were still-born and six children died within a few hours after birth. This leaves a maternal mortality in the series of 8.6% and a still birth mortality of 40%. Compare this with the figures quoted in the article already referred to, or in the published articles of most operators and it will seem as if the result speaks for itself, for so far as the mothers were concerned, the mortality has been reduced by over two-thirds, and the still birth mortality has been increased.

"All of these cases were true convulsive toxemias having had one or more convulsions before admission, and all were treated in approximately the same way.

"Coming now to the specific treatment as it has been conducted in the cases comprising this series, it is as follows:

"Immediately on entrance to the hospital, the patient's blood pressure is taken, a catheterized specimen of urine obtained and she is put into an isolation room which is darkened and as much quiet as possible obtained. She is then given by hypodermatic injection ½ grain morphine sulphate, her stomach is washed out, 2 ounces of castor oil is poured down the tube, at the end of the lavage, and she is given a colonic irrigation of 5 gallons of 5% glucose solution.

"If the blood pressure is over 175 systolic, phlebotomy is done and a sufficient quantity of blood is extracted to bring the pressure down to 150. In the opinion of the writer it is unwise to bleed the patient if the pressure is lower than 175 systolic, as if it becomes for any reason necessary to operate a little later and a good deal of blood is lost during the operation, the pressure will be reduced so low that the patient may die from shock. The same objection applies to the ante-partum administration of large doses of veratrum viride.

"The patient is now kept quiet and ¼ grain morphine administered every hour until the respirations drop to eight per minute. At this time convulsions have usually ceased, the patient will have fallen into labor, and, as has happened in practically all of our cases, will deliver herself in a short time.

"Of the cases included, twenty-three were spontaneous deliveries, nine were delivered by low forceps, two by version and breech extraction, one breech presentation and delivery.

"It is interesting to note that all the patients in whom a fetal heart was heard on admission were delivered of living children, and that in none of these were there any signs whatever of the morphine which had been administered to the mother, which is interesting in view of the enormous amount of unfavorable comment caused by the opponents of scopolamin-morphine amnesia, where as a rule only 1/6 of one grain of morphine is used during the whole treatment."

A. B. Somers.

## Communications.

### Reporting of Accidents From Local Anesthetics.

To the Editor: The Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association has undertaken a study of the accidents following the clinical use of local anesthetics, especially those following ordinary therapeutic doses. It is hoped that this study may lead to a better understanding of the cause of such accidents, and consequently to methods of avoiding them, or, at least, of treating them successfully when they occur.

It is becoming apparent that several of the local anesthetics, if not all of those in general use, are prone to cause death or symptoms of severe poisoning in a small percentage of those cases in which the dose used has been hitherto considered quite safe.

The infrequent occurrence of these accidents and their production by relatively small doses point to a peculiar hypersensitiveness on the part of those in whom the accidents occur. The data necessary for a study of these accidents are at present wholly insufficient, especially since the symptoms described in most of the cases are quite different from those commonly observed in animals even after the administration of toxic, but not fatal, doses.

Such accidents are seldom reported in detail in the medical literature, partly because physicians and dentists fear that they may be held to blame should they report them, partly, perhaps, because they have failed to appreciate the importance of the matter from the standpoint of the protection of the public.

It is evident that a broader view should prevail, and that physicians should be informed regarding the conditions under which such accidents occur in order that they may be avoided. It is also evident that the best protection against such unjust accusations, and the best means of preventing such accidents consist in the publication of careful detailed records when they have occurred, with the attending circumstances. These should be reported in the medical or dental journals when possible; but when, for any reason, this seems undesirable, a confidential report may be filed with Dr. R. A. Hatcher, 414 East Twenty-sixth Street, New York City, who has been authorized by the Committee to collect this information.

If desired, such reports will be considered strictly confidential so far as the name of the patient and that of the medical attendant are concerned and such information will be used solely as a means of studying the problem of toxicity of this class of agents, unless permission is given to use the name.

All available facts, both public and private, should be included in these reports, but the following data are especially to be desired in those cases in which more detailed reports cannot be made:

The age, sex and general history of the patient should be given in as great detail as possible. The state of the nervous system appears to be of especial importance. The dosage employed should be stated as accurately as possible; also the concentration of the solution employed, the site of the injection (whether intramuscular, perineural or strictly subcutaneous,) and whether applied to the mouth, nose or other part of the body. The possibility of an injection having been made into a small vein during intramuscular injection or into the gums should be considered. In such cases the action begins almost at once, that is, within a few seconds.

The previous condition of the heart and respiration should be reported if possible; and, of course, the effects of the drug on the heart and respiration, as well as the duration of the symptoms, should be recorded. If antidotes are employed, their nature and dosage should be stated, together with the character and time of appearance of the effects induced by the antidotes. It is important to state whether antidotes were administered orally, or by subcutaneous, intramuscular or intravenous injection, and the concentration in which such antidotes were used.

While such detailed information, together with any other available data, are desirable, it is not to be understood that the inability to supply such details should prevent the publication of reports of poisoning, however meager the data, so long as accuracy is observed.

The committee urges on all anesthetists, surgeons, physicians and dentists the making of such reports as a public duty; it asks that they read this appeal with especial attention of the character of observations desired.

Torald Sollmann, Chairman,
R. A. Hatcher, Special Referee,

Therapeutic Research Committee of the Council on Pharmacy and Chemistry of the American Medical Association.

# THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, OMAHA, MAY 7, 8, 9, 1918

Vol. III. Norfolk, Nebraska, March, 1918. No. 3

## CONTENTS.

Page

Convulsions in Children, W. O. Colburn, M. D., Lincoln 73

The Red Cross and the Antivivisectionists 76

Early Recognition of Cancer of the Breast, J. S. Welch, M. D., F. A. C. S., Lincoln 81

Laboratory Diagnosis of Early Tuberculosis, Miles J. Breuer, M. A., M. D., Lincoln 83

Flat Feet, J. E. M. Thumson, A. B., M. D., Lincoln 87

Fracture of the Os Calcis, J. W. Duncan, M. D., Omaha 89

Editorial 91

Rapid Methods in Tissue Diagnosis, Miles J. Breuer, M. A., M. D., Lincoln 94

Base Hospital List Complete—Enlisted Personnel of Nebraska Unit Finished 95

Nebraska State Medical Association Program 96

Military Notes and News Items 98

Case Reports—

- Foreign Body in the Appendix, F. A. Long, M. D., Madison 99
- Chancre of the Lip, M. J. Breuer, M. D., Lincoln 99
- Acute Lymphatic Leukemia, Frank M. Conlin, M. D., Omaha 100

Cultures of Tubercle Bacilli from the Blood and Other Body Fluids in Clinical Diagnosis 101

Standards for Diagnosis, Classification and Treatment of Tuberculosis in Children and Adults 102

Book Reviews 102

Abstracts—Practical Medicine Series—DeLee. Treatment of Eclampsia 103

## Convulsions in Children.*

W. O. Colburn, M. D., Lincoln.

A convulsion is not a distinct disease entity, but merely a symptom, with some definite cause producing it, with many of us it is a diagnosis. A carefully taken history or a through painstaking examination might reveal some very definite causes for this clinical manifestation.

Convulsions are far more frequent in the first two years of life. Kassowitz states, that 80% occur during this period. They are either due to peculiarities of the diseases to which children are subject, and which differ from the diseases of adults, or to peculiarities of the childish organism, or both of these.

Convulsions are of different etiologic origin and may be divided into two main groups or classes.

1. Convulsions due to organic lesions, or some real demonstrable lesion of the nervous system, producing a direct irritation of the cortex of the brain.

2. Convulsions due to functional disturbances, or nonspecific lesions of the nervous system.

Groupe 1. Convulsions due to organic diseases. This type of convulsions is more apt to manifest itself by being more severe and prolonged, often persisting for half an hour or more, accompanied with unconsciousness, sometimes unilateral, indicating a localized lesion of the brain. This symptom suggesting a definite lesion occurs as such in the majority of instances after the fifth year. In the first two years of life, or in infancy, it is so recognized in the following named conditions.

1. Meningitis.

---

*Read before Lancaster County Medical Society, Feb. 2, 1918.

2. Intracranial hemorrhage.
3. Acute encephalitis.
4. New growths of the brain.
5. Hydrocephalus.
6. Cerebral abscess.
7. Syphilis.
8. Solitary or multiple tubercles.
9. Developmental defects of the brain.

Under the head of meningitis I wish to report the following case:

Case History No. 618. Male, age 8 months. I was called to see this case August 1, 1917, because the baby was having a convulsion. The child was still convulsing on my arrival and I used chloroform at once to control it, and later chloral in the rectum.

History. No tubercular history obtainable from parents. Baby breast fed. Gave history of chronic lung trouble since four months of age. Baby had been restless and nervous when awake, but had slept a great deal for the past six weeks, and nursed poorly. Mother had noticed she was failing rapidly in health previous to the convulsion.

### Physical Examination.

Head normal in size and shape. Anterior fontanelle was about 1¼ inches in diameter and bulged markedly. Ear drums normal. Pupils equal and reacted to light, but she did not notice. Mouth and throat were normal. Heart normal. Lungs were full of fine rales. The abdomen was sunken but not rigid. Liver was palpable one inch below costal margin. Spleen not palpable. Arms slightly spastic, knee jerks somewhat exaggerated. Kernig absent, temperature 100, pulse 130, respiration 30. A Von Pirquet test was made but only slightly positive. I observed the child for about two weeks before its death and a marked rigidity of the neck developed a few days after the first visit. Brudzinskys sign was positive. Baby vomited all or most all food for the two weeks.

### Diagnosis.

A diagnosis of tuberculous meningitis was made from the clinical symptoms. Parents would not permit a lumbar puncture nor an autopsy. The bulging fontanelle alone indicated increased intracranial pressure, which is sufficient for a diagnosis of meningitis. The onset was against the cerebro spinal type of meningitis.

Intracranial hemorrhage is represented in the following case:

Case history No. 561. Female, aet. 16 months. Birth, weight 8 pounds.

History: Normal labor although long and hard, lasting over 20 hours. Breast fed even up to present time. When two weeks old, the baby had a distinct cyanotic spell but no convulsion. Development was considered normal by the mother, up until the eighth month, when baby began to have more cyanotic spells, and when convulsions were frequent.

### Physical Examinations.

Baby almost normal in size and weight. The weight was 21 pounds at 16 months of age. The skin showed a marked cyanosis and a deathly pallor. Anterior fontanelle about ½ onch in diameter and bulging somewhat. Considerable spasticity of upper and lower limbs. Spinal puncture was done and 15cc of fluid was obtained, cell count 22, Nonne and Wassermann tests negative. Chest full of course rales every place. Heart, loud, systolic murmurs were heard all over the chest, and a thrill could easily be determined on palpation. Cardiac area enlarged to right and slightly to the left.

Ante mortem diagnosis: Congenital heart disease. The convulsions seemed to start in left arm and leg invariably, and pressure over the right hemisphere had been considered.

Autopsy: Large clot over right hemisphere with marked degeneration of brain tissue. (Encephalitis). The heart showed a patent ductus arteriosus.

Intracranial hemorrhage is most often seen in the new born either as a result of some injury during intra-uterine life or more commonly as a result of some injury received during parturition. We all no doubt have observed these cases. When you have a new born baby who suddenly has a severe prolonged convulsion, lasting for half an hour or an hour, and sometimes an eclamptic state, which lasts for many hours, with loss of consciousness, you may be quite safe in making a diagnosis of intracranial hemorrhage. A few o fthese cases recover in a day or two but the large majority die.

Decompression operation has been successfully done in some of these cases and is worthy of a trial. Lumbar punctures have also been done, removing spinal fluid that is under pressure, and many recoveries have been recorded.

The following case history is illustrative of the subdivision, acute encephalitis.

This history card was misplaced or lost, but I will be able to give a few points from memory and I am anxious to report this case because an autopsy was done. I was called in consultation to see the baby about one year of age. Baby was convulsing almost continually, and controlled somewhat by paregoric. Death occurred within twenty-four hours.

Autopsy findings: A great amount of broken down brain substance was found and the culture grew pneumococcus. Diagnosis acute encephalitis due to the pneumococcus.

Groupe 2. Convulsions due to functional disturbances. This type of convulsions is of very short duration, as compared with that of the organic group, lasting perhaps one to three minutes. The infant is often conscious. Spasmophilia and tetany are terms used by emminent authorities for one and the same condition and used in a very broad sense, covering almost every convulsion of this type. As a matter of fact, it seems only to mean an instability of the nerve centers, in which often heredity seems to play some part. The diagnosis is determined by the presence of laryngospasm, carpopedal spasm, Chvostek's and Trousseau's signs. It is important to get the family history in these cases as the significance of heredity has been fully demonstrated showing that children without any demonstrable weakness, but exhibiting a spasmophilic diathesis are born of mothers who have themselves had spasmophilia in their childhood, and in some instances still present distinct latent symptoms. In a recent case of spasmophilia I was able to llicit a far better Chvostek's sign in the mother than in the child. Causes of this type of convulsions may be reflex or toxic.

Under reflex causes we may mention rachitis, gastric disturbances, such as acute catarrhal gastritis, foreign bodies in the ear or nose, scalds and burns and mental disturbances, such as fright. In rare cases, dentition, phimosis or intestinal parasites seem to be a factor. Improper feeding may be regarded as the most frequent cause of convulsions.

The toxic causes are more frequently manifested in the onset of acute infections, most frequently in pertussis, scarlet fever, and pneumonia. Uremia is another example of a toxic cause.

The following case histories are representative of the functional type.

Case history No. 244. Female aet 13 months. Mother extremely neurotic. I have now observed this baby for one year and scarcely two weeks have passed at any time without a convulsion or a tendency to a convulsion. They almost always come on when she is angry, frightened or in pain. A fit of crying almost always ended in a convulsion. She would often have one if she was refused anything which she wanted. A fall or a bump was usually followed by one. The attacks occurred more frequently when the bowels were not moving freely, when she was cutting teeth, when she was not kept free from excitement and when she was below par physically.

### Physical Examination.

She was normal in size and weight. Color good but cheeks reddened in every attack, temperature usually 99½ to 100½ degrees. Slight rachitic rosary. The heart, lungs and abdomen normal. The knee jerks were equal and normal. Urine negative on several examinations, at times I have been able to demonstrate a Chvostek, but the Trousseau's sign has always been negative.

### Diagnosis.

This child has an unusually irritable nervous organization and the convulsions never occur without some definite cause, though often a trivial one. These convulsions might be termed reflex convulsions, but I think I am justified in classing this case under the head of spasmophilic diathesis.

Case history No. 150. Female aet. 2½ years. Case referred to me on the tenth day of a pneumonia of the streptococci type. The child had been seriously sick from the onset with a convulsion and the tenth day another convulsion occurred.

### Physical Examination.

Right apex and most of right lung showed consolidation. Marked distention of abdomen. Temperature 104, pulse 140, respiration 58. A convulsion in this stage of pneumonia was suggestive of a meningitis. A specimen of urine was asked for but the nurse failed to get it for me on the following day.

On February 28, left ear drum was bulging and was opened. The following day March 1, the right ear drum was bulging and was opened. Temperature dropped to 102 but coma still persisted. Lumbar puncture was done March 2, fluid under slight pressure, but the fluid was entirely negative. The urine was finally obtained on March 3, and was loaded with albumen and casts.

Fischer's solution was pushed and on March 6, patient was much better and more rational. Albumen and casts persisted in the urine. On March 12 temperature dropped to normal but the child was very restless. She become very pale and white like wax. Blood counts had been done from time to time but the one on March 11, gave the following findings: Haemoglobin 30%, red blood cells 2,500,000.

On March 12, 250cc of blood was transfused into the baby. She had been very, very hard to feed before this, all the fluids were simply forced down. After the transfusion she was very eager for fluids and anything that was put to her mouth and she seemed more rational than at any time of her illness. Twenty-four hours after transfusion blood count showed a gain of 1,000,000 red cells and haemoglobin 60%, twenty-four hours after transfusion, anuria occurred forty-eight hours later. No autopsy.

Diagnosis: Streptococcic pneumonia with uremic convulsions.

Case history No. 314. Male aet. 5 months. Birth weight 9 pounds, present weight 14 pounds. Called to see patient February 3, 1917. Had pneumonia when two weeks old and weight dropped to 4½ pounds. Fed from birth on condensed milk. January 4 had nine convulsions, January 15, nine convulsions, January 24, two convulsions; January 27, had three convulsions; February 3, had three convulsions. Convulsions last five minutes usually, but occasional ones were very severe lasting twenty to thirty minutes. Irregular feedings, stools foamy, sour and occasionally green, showing carbohydrate indigestion. Abdomen usually distended.

Diagnosis: Convulsions probably due to intestinal indigestion of the carbohydrate type. Baby was put on modified milk feedings and fed at three hour intervals. Sodium bromide was given ½ gr. t. i. d. The baby had no more convulsions after February 5.

As to prognosis, this is usually good, but should be guarded until a definite cause is determined. It is always serious if the attacks occur in the newborn, in advanced childhood, or if they are unduly prolonged and occur often. If convulsions usher in a disease they are not of as great prognostic importance as when they occur in the course of the disease. An exception to this statement must be made in cerebrospinal meningitis, in which initial convulsions are a bad omen. Holt states that the convulsions of pertussis are especially fatal, and also those of asphyxia when they occur late, in any form of laryngeal or pulmonary disease.

### Conclusions.

1. A convulsion is a symptom and not a disease.

2. In convulsions in the newborn, if cause be from cerebral hemorrhage, do a spinal puncture and if not relieved then do a decompression operation. At least try and decrease the heavy mortality that we now have from this condition.

3. Always do a urine analysis, for occasionally a uremia is the cause of the convulsions.

4. A convulsion of long duration, say half an hour or more is suggestive of an organic lesion. Likewise, one of short duration, say two or three minutes is most likely to be of the functional type.

---

## *The Red Cross and the Antivivisectionists.

### An Appeal to the Families and Friends of Our Heroic Troops and to the Common Sense of the American People.

First of all let me make two facts clear.

1. This paper has been written entirely on my own responsibility and not at the suggestion directly or indirectly of the Red Cross. I have been moved to write it solely in the interest of our brave soldiers, and especially because their sufferings and lives are involved in the suit against the Red Cross by the antivivisectionists to prevent the use of $100,000 of the Red Cross funds in such beneficent life-saving researches.

2. The Red Cross as an organization is neither an opponent, nor an advocate, nor a defender, of vivisection. It states officially that the supreme aim of the Red Cross is to relieve human suffering (and it might well have added "and to save thousands of human lives").

> The War Council was advised from the ablest sources available that an immediate appropriation for medical research would contribute to that end. The War Council could not disregard such advice.

They then refer to the many unsolved medical and surgical problems that have arisen from wholly new conditions and methods of warfare. Letters from a number of my own surgical friends in France emphasize and the medical journals teem with papers on these new problems. They relate to the treatment of the horribly infected wounds—and practically all wounds are of this kind—never met with in civil surgery; to the treatment of "trench fever"—a peculiar form of fever never before seen; of "trench heart;" of "trench foot," often followed by lockjaw; of "trench nephritis" (inflammation of the kidneys); gas gangrene; tetanus; shell shock; poisonous gases; fearful compound fractures, especially of the thigh, etc. Every man enabled to return to active duty as a result of solving these problems helps to win the war. Every man who does, or is permanently disabled because of our ignorance, hinders our winning the war.

It must be remembered that our surgeons, physicians and physiologists over there are the very flower of the American medical profession. These fine men under the supervision of the Medical Staff of the United States Army, superintend all the work. Nothing is done that has not the direct approval of Brigadier General A. E. Bradley, U. S. Army.

Experiments on animals form a necessary but a minor feature of the researches.

> The animals used are principally guinea-pigs, rabbits and white rats. If operations causing pain to animals are performed, anesthesia is used.

This certainly does not suggest "cruelty" or "torture."

---

*Reprinted from "Science," Feb. 22, 1918.

I appeal to the common sense of the American people and especially to the families and friends of our brave soldier boys: Which do you prefer (1) That our soldiers shall be protected from attacks of these new (as well as of the familiar) diseases, their sufferings lessened or even prevented, and their lives saved, or (2) will you insist that not a single guinea-pig, rabbit or rat shall suffer the slightest pain or lose its life, in researches to lessen the suffering and save the lives of our soldiers?

Remember, if you choose the second you deliberately condemn your son, brother, or husband to sufferings far beyond any suffering of these animals. In many cases, as I shall show, you will condemn your dear one to death, and in some cases a horribly painful death.

In the "Bill of Complaint" of the anti-vivisectionists, seven grounds of opposition to vivisection are mentioned. The sixth reads as follows:

> That although it (vivisection) has been practiced for many years, nothing has been discovered by means of it that is at all beneficial to the human race.

This is the crux of the whole matter. If this were true I would vigorously oppose vivisection myself.

I entered upon my medical studies in 1860. I took part in the horrible surgery of the Civil war—as we now know it was. I have taught anatomy and surgery to not far from 10,000 students. I taught and practiced the old dirty surgery—the only kind we then had—up to October 1, 1876. Since that date I have practiced and taught the new antiseptic surgery, which has been created by researches similar to those now proposed. Since the great war began I have diligently studied the newest surgery. I submit, therefore, that I may be presumed to be fairly familiar with these three stages of surgery. Let me give now a few examples of some of the things that have "been discovered by it (vivisection)" and that "are beneficial to the human race."

I may remark in passing that animals themselves have benefited by the same means, almost, and possibly quite as much as the human race.

1. **Typhoid Fever.** This has been one of the historic scourges of armies. In 1880 the bacillus—the cause of the fever—was discovered. It was soon proved that the disease was spread through infected milk, infected water, and very largely by the house-fly. The last, after walking over the excrement of a typhoid patient, and then walking over our food, conveyed the disease. Prevention of contamination by these three means—sanitary measures based on the discoveries of bacteriology prevent the disease to a large extent. But our real triumph over the disease was not achieved until lately.

I may here call attention to the fact that the antivivisectionists entirely reject bacteriology, a science which has disclosed to us the causes of many diseases, and has enabled us to prepare antitoxins to neutralize the poisons developed by these bacteria. Without bacteriology the physician and the surgeon today would be as helpless as a mariner without a compass.

| | |
|---|---|
| During the Civil War typhoid fever resulted in | 79,462 and 29,336 |
| In the Boer War there were<br>(In that war the total number of deaths was 22,000. Typhoid alone, therefore, was responsible for more than one-third of all the deaths). | 58,000 and 8,000 |
| In our war with Spain there were<br>Our Army numbered 107,973 men Therefore every fifth soldier fell ill with typhoid in 1898! Over 86 per cent of all deaths in this war were due to typhoid! | 20,738 and 1,580 |

During the Boer War imperfect attempts were made to control typhoid by an antitoxin similar to that against diphtheria, which has saved such multitudes of children. Gradually the method has been improved so that in our army it was at first recommended as a voluntary protection (1909). The results were so favorable that in 1911 it was made compulsory. It has been said that it should still be voluntary. But as every case of typhoid imperils the health and life of multitudes we surely have a right to make it compulsory so as to protect all the rest. All that is necessary to prove this is to look at these tables of cases and deaths in our Army and Navy.

Typhoid Fever in the United States Army.

| Year | Cases | Deaths |
|---|---|---|
| 1906 | 210 | 12 |
| 1907 | 124 | 7 |
| 1908 | 136 | 11 |
| 1909 | 173 | 16 |

Anti-Typhoid Vaccination Made Compulsory.

| Year | Cases | Deaths |
|---|---|---|
| 1911 | 70 | 8 |
| 1912 | 27 | 4 |
| 1913 | 4 | 0 |
| 1914 | 7 | 3 |
| 1915 | 8[1] | 0 |

Typhoid Fever in the United States Navy.

| Year | Cases | Deaths |
|---|---|---|
| 1909 | 189 | 17 |
| 1910 | 193 | 10 |
| 1911 | 222 | 15 |

Anti-Typhoid Vaccination Made Compulsory.

| Year | Cases | Deaths |
|---|---|---|
| 1912 | 57 | 2 |
| 1913 | 22 | 4 |
| 1914 | 13 | 0 |
| 1915 | 15 | 1 |

On the Mexican border, though the fever was rife near the camps, only one man out of 20,000 troops, a civilian, who unfortunately escaped vaccination, fell ill with it.

Now let us see the results in the armies in the present war.

In the British armies, on March 1, 1917, Mr. Foster, Under Secretary for War, stated in the House of Commons that

> The last weekly returns showed only twenty-four cases in the four British armies in France, Salonica, Egypt and Mesopotamia. He added that the total number of cases of typhoid fever in the British troops in France down to November 1, 1916, was 1,684, of para-typhoid,[2] 2,534, and of indefinite cases, 353, making a total of 4,571 of the typhoid group.

Now the English armies number at least 5,000,000. If they had suffered as our Army did in 1898 there would have been 1,000,000 cases! In fact there have been less than 4,600! Besides that, the percentage of fatal cases in the inoculated men was 4.7 per cent, in the uninoculated 23.5 per cent, and perforation of the bowel, the most dangerous complication, occurred six times more frequent among the unvaccinated than among those who had been protected. In the British armies the anti-typhoid vaccination is still voluntary but over 90 per cent are thus protected. If it had been compulsory, hundreds of the 4,571 who died would have been saved!

In our own army in over four months (September 21, 1917, to January 25, 1918) a period one month longer than our war with Spain (the Surgeon General's Office gives me the official figures), we have had an average (i. e. every day of these four months), of 742,626 men in our cantonments and camps. These men have come from all over the country, in many cases from where autumnal typhoid was reaping its annual harvest, in practically all cases unprotected by the vaccination. Between these two dates there have been 114 cases of typhoid and 5 of paratyphoid. Had the conditions of 1898 prevailed there would have been 144,506 cases instead of 119 in all! The reason is clear. The men were all immediately vaccinated against typhoid, paratyphoid and smallpox.[3]

Besides this as soon as the antityphoid inoculation was completed the number of cases rapidly fell and from December 14 to January 25—six weeks!—there have been only six cases of typhoid and one of paratyphoid among probably now nearly 1,000,000 men! Truly marvelous!

Now all this is the direct result of bacteriological laboratory work. Was it not worth while? Has it not "benefited the human race?" Are you not glad that your son is thus protected?

I may add that the German armies show a similar absence of typhoid. I have seen no figures but only general statements.

**Tetanus or "Lock-jaw."** Few people realize what terrible suffering this disease causes. The mind of the patient is perfectly clear, usually to the very end, so that his sufferings are felt in their full intensity. All of my readers have had severe cramps in the sole of the foot or calf of the leg. The pain is sometimes almost "unbearable." In tetanus not the muscles of the jaw alone are thus gripped, but the muscles all over the body are in cramps ten or twenty fold more severe, cramps so horrible that in the worst cases the muscles of the trunk arch the body like a bridge and only the heels and the head touch the bed!

> Never shall I forget a fine young soldier during the Civil War who soon after Gettysburg manifested the disease in all its dreadful horror. His body was arched as I have described it. When at intervals he lay relaxed, a heavy footstep in the ward, or the bang of a door, would instantly cause the most frightful spasms all over his now bowed body and he hissed his pitiful groans between tightly clenched

---

[1] Four in the United States; 4 in Hawaii.

[2] A form of fever caused by a bacillus somewhat similar to the typhoid bacillus but causing a much milder infection.

[3] Of the latter disease there have been only 4 cases, all unvaccinated.

teeth. The ward was emptied, a half-moon pad was hung between the two door-knobs to prevent any banging; even the sentry, pacing his monotonous steps just outside the ward, had to be removed beyond earshot. . . . The spasms became more and more severe, the intervals shorter and shorter, it did not need even a footfall now to produce the spontaneous cramps, until finally a cruelly merciful attack seized upon the muscles of his throat and then his body was relaxed once more and forever. He had been choked to death.

Do you wonder at the joy unspeakable which we surgeons have felt of late years as we have conquered this fearful dragon? In 1884 the peculiar germ, shaped like a minature drum-stock, was discovered. Its home is in the intestines of animals, especially of horses. The soil of France and Belgium has been roamed over by animals and manured for over 2,000 years, even before Julius Caesar conquered and praised the Belgians. The men in the trenches and their clothing are besmeared and bemired with this soil, rich in all kinds of bacteria, including those of tetanus, gas gangrene, etc. When the flesh is torn open by a shell, ragged bits of the muddy clothing or other similarly infected foreign bodies are usually driven into the depths of the wound. Now the tetanus bacilli and the bacilli of "gas-gangrene" are the most virulent of all germs. It takes 225,000,000 of the ordinary pus-producing germs to cause an abscess and 1,000,000,000 to kill, while 1,000 tetanus bacilli are enough to kill. This readily explains the frightful mortality of tetanus during the Civil War. It killed 90 patients out of every hundred attacked.

In the early months of the Great War the armies suddenly placed in the field were so huge that there was not a sufficient supply of the antitoxin of tetanus. Hence a very considerable number of cases of tetanus appeared. Now it is very different. At present every wounded soldier, the moment he reaches a surgeon is given a dose of antitetanic serum. As a result, tetanus has been almost wiped off the slate. I say "almost," because to be effective the serum must be given within a few hours. The poor fellows who lie for hours and even days in No Man's Land can not be reached till too late. All the surgeons on both sides concur in saying that tetanus, while it still occurs here and there, has been practically conquered.

Every step of this work has been accomplished by the bacteriologists and the surgeons working together in the laboratory and the hospital.

Would you seriously advise that no such experimental researches should have been carried on and that your boy should suffer the horrible fate of my own poor Gettysburg boy? Confess honestly, are not these and other similar researches to be described as humane?—as desirable?—nay, as imperative?

But the antivivisectionists declare that bacteriology is false—that such vaccination is "filling the veins with 'scientific filth' called serum or vaccine!" They are doing their best to persuade our soldiers not to submit to any such "vaccination!"

Nay, more "we feel," say forty-one of our medical officers on duty in France, "that any one endeavoring to stop the Red Cross from assisting in its humanitarian and humane desire to prevent American soldiers from being diseased, and protecting them by solving the peculiar new problems of disease with which the Army is confronted is in reality giving aid and comfort to the enemy."

**Smallpox.** The word vaccination leads me to say a word about smallpox. I confess that I was amused by a recent paper in an antivivisection journal entitled "Vaccination as a Cause of Smallpox!" During the last year hundreds of thousands of soldiers have been vaccinated against smallpox. Surely there should have been some cases of that disgusting disease if it were caused by vaccination.

But what are the facts? I have just received the report of Surgeon General Gorgas for 1917. The section on smallpox reminds one of the celebrated chapter on "Snakes in Ireland." On p. 81 on smallpox in the army in the United States, I read "no cases of smallpox occurred within the United States proper during the year." On p. 175, I read "no cases (of smallpox or varioloid) occurred in the islands" (among the American troops in the Philippines). On p. 188, I read under smallpox that "nine cases occurred during the year" (among the Philippine Scouts).

My friend and former student, Dr. Victor G. Heiser, as director of health in the Philippine Islands for years, vaccinated over 8,000,000 persons without a death—and with what result? In and around Manila the usual toll of smallpox had been 6,000 deaths and about 25,000 cases annually. In the twelve months after his vaccination campaign was finished there was not one death from smallpox.

**Per contra,** in 1885 in Montreal, as stated by Osler, one Pullman porter introduced smallpox into a largely unvaccinated city. There followed 3,164 deaths and enormous losses to the Montreal merchants.

But why say more? We all know that a single case in any community causes every intelligent person to be protected by vaccination.

**Gas-Gangrene.** One of the terrible and new surgical diseases developed by this war is called "gasgangrene." It has no relation to the poisonous gases introduced by the barbarous Germans at Ypres. About twenty-five years ago Professor W. H. Welch, of the Johns Hopkins Hospital, discovered a bacterium which produced gas in the interstices between and in the muscles. This bacillus does not occur in Great Britain. I never saw a case of gasgangrene in the Civil war, and but one case since then in civil practice. On the contrary in Belgium and France in the soil and, therefore, on the clothing and on the skin of the soldiers these bacilli abound. From what Bashford calls the "cess-pool of the wound" the terms travel up and down in the axis of the limb. If it escapes from a puncture it will take fire from a match. Gas has been observed within five hours. An entire limb may become gangrenous within sixteen hours. If the whole limb is amputated the gas may be so abundant that the limb will float in water! Death is not long delayed.

Now your son in France runs a very serious risk of becoming infected with this deadly germ. Would you be willing positively to forbid any experiments on animals which could teach us how to recognize this infection as early as possible? Would you forbid any experiments which might teach us how to conquer or better still to prevent this virulent infection and save his life? Which would you prefer should suffer and very possibly die, a few minor animals or your own son? If a horse or a dog or even a tiny mouse can help in this sacred crusade for liberty and civilization, if it even suffers and dies, is it not a worthy sacrifice? Should they be spared and our own kith and kin give up their lives?

I need not wait for a reply! I am sure you would say "my boy is worth 10,000 rabbits or guinea-pigs or rats! Go on! Hurry, hurry! and find the remedy." That is true humanity which will save human lives even at the expense of some animals' lives.

Now see the result. By careful observation and experiments with different remedies the surgeons have discovered valuable methods of treatment. But very many still die. Prevention is always far better than cure. At the Rockefeller Institute Drs. Bull and Ida W. Pritchett have discovered a serum which in animals prevents this gasgangrene and yet does no harm to the animal. It is now being tried on the soldiers in France.

Again I ask: Is it not our duty even to insist on such experiments so that our troops may be spared the dreadful suffering and even death following this virulent infection? If the Bull-Pritchett serum proves ineffective should not our efforts be redoubled? The common sense of the American people will reply: "Yes, by all means. You will be recreant to humanity and to your duty if you do not."

**Modern Surgery.** "Lister," in Howard Marsh's fine phrase "opened the gates of mercy to mankind." Pasteur and Lister are the two greatest benefactors of the human race in the domain of medicine. I am not sure but that I might even omit the last five words. The revolution which Lister produced in surgery is so well known to every intelligent person that I need only say a few words. Forty years ago a wholly new surgical era was inaugurated by Pasteur and Lister. In the Civil War there were recorded 64 wounds of the stomach and only one recovered. Otis estimated the mortality at 99 per cent. In over 650 cases of wounds of the intestines there were only five cases of recovery after wounds of the small bowel and 59 from wounds of the large bowel—together only 64 out of 650 recovered, i. e., over 90 out of every 100 died!

The complete statistics of the present war can not be tabulated and published for some years. I give, however, the result of one series of abdominal gunshot wounds as a contrast, on a far larger scale and in far worse wounds. Out of 500 such operations, 245 recovered! and only 255 died! Contrast 51 per cent of deaths in these wounds with mutilation and infection unutterably worse than in the Civil war, with 99 per cent of deaths, according to Otis.

Is not this a triumph of bacteriological and surgical research? Would you prohibit similar researches now when your boy's life may be saved by them?

Is not this one of the things that have "been discovered" by vivisection and has not such change in surgical treatment been of "benefit to the human race?" In all honesty would you be willing to have your son treated as I myself (may God forgive me!) ignorantly treated hundreds during the Civil war.

This advance I do not **think** or **believe**, but I **know** is due to Pasteur and Lister and their followers. I know it by personal experience just as you know the high cost of living, the shortage of sugar and the scarcity of coal.

The bacteriology which the antivivisectionists scorn and reject I **know** is the **cornerstone** of modern surgery. Before Lister's day out of 100 cases of compound fracture 66 died from infection. Now less than one out of 100 die. Before Lister my old master in surgery, Dr. Washington L. Atlee, one of the pioneers in practicing ovariotomy, lost two out of every three patients—now only two or three in a hundred die. Before Lister we never dared to open the head, the chest or the abdomen unless they were already opened by the knife, th bullet or other wounding body. Now we open all of these great cavities freely and do operations of which the great surgeons of the past never dreamed in the wildest flights of their imagination. Could they return to earth they would think us stark crazy until they found that the mortality was almost negligible and the lives saved numbered hundreds of thousands.

I have given but a few instances of the many wonderful benefits which have resulted from medical research in every department of medicine. But I believe they are sufficiently convincing. I can sympathize with the deep feeling of those who wish to spare pain to animals, but is it not a higher and more imperative, a holier sympathy that has spared and will spare pain eventually to human beings and also to other animals in uncounted numbers?

Do you wonder that after over forty years of steady practice, teaching and writing I assert, conscious of the great responsibility of my words, that "I regard experimental research in medicine as a medical, a moral and a Christian duty towards animals, towards my fellow men and towards God."

There is so much yet to be learned chiefly, by experimental research. So many devoted lives to be saved to our country and to mankind if we only knew how! Do you wonder that I am in dead earnest?

Finally. What have the antivivisectionists themselves done to diminish sickness and save life?

A. In animals? Absolutely nothing.

In spite of the enormous ravages of animal diseases causing enormous suffering to animals and costing this country $215,000,000 every year, not a single disease has had its ravages diminished or abolished as a result of anything they have done. But medical research is saving every year thousands of animals from anthrax, hog cholera, chicken cholera, Texas fever and other diseases.

B. In human beings? Absolutely nothing. I do not know a single disease of human beings which has had its ravages checked, abated or abolished by any work ever done by the antivivisectionists.

The only thing they have done has been to throw as many obstacles as possible in the path of those who are striving to benefit both animals and men.

This present suit is characteristic.

W. W. Keen.

Emeritus Professor of Surgery, Jefferson Medical College and Major in the Medical Reserve Corps, U. S. Army.

## Early Recognition of Cancer of the Breast.*

J. S. Welch, M. D., F. A. C. S., Lincoln.

The brief consideration of this very important subject allowed by the ten minutes at my command today can be made under three headings.

(1) Teaching patients (largely women) the importance of promptly and correctly attending to all breast abnormalities.

(2) Familiarity of the doctor with the clinical symptoms met with early in most malignant cases.

(3) Microscopic pathological evidence in the operating room.

### I

Cancer kills about 60,000 people annually in the United States alone. Should Germany kill one-half that number this year, we would quadruple the speed of our already buzzing governmental wheels toward greater prophylactic efficiency. Because this unseen enemy wages its warfare subtly is no good reason why the menace should not be heralded to our people. A call to arms must precede any battle. Our women have heard rumors of cancer trouble, but no real war has been declared, no training camps established, no systematic organization made of intelligence forces. Indeed, as Germany has domineered over her trustful little neighbors, so I fear we reassuring doctors have deceived our trustful women. We have said, concerning a small breast tumor, "No, probably not a cancer; but we will just watch it a few months to see." This is criminal to the woman whose small lump is a forming cancer. Any fool "who runs may read," in a few months; but for these women there is a mortality of ninety-nine per cent.

---

*Read before Elkhorn Valley Medical Society, Fremont, Jan. 10, 1918.

But for the stinging truth in these statements I would ask your pardon for uttering them before a scientific body like this. My purpose is none other than to recommit myself (and you, I hope) to the cancer publicity teaching staff. How can we serve in this capacity?

In every routine physical examination look well to the breast. Tell the patient something about cancer—scientific or otherwise—according to the receptivity of her mind, and pledge her to perpetuate it. Establish a health week and have a cancer day. Invite yourself or some other celebrity to tell them the cancer story. Urge people to see the cancer exhibit at the state fair and elsewhere; attend health weeks and cancer talks in other towns. When the war is over, interest the mighty Red Cross, perhaps, in this life-saving measure. One cannot do all this personally. But take the time to interest some thoroughly organized social-welfare body (and of these there are many), then act in an advisory capacity. One unassuming woman in our local profession has been instrumental in bringing such men as Kanavel, Bloodgood and others to our people, and in the wake of their lectures come many women with early breast troubles.

This, then, is my first point: Every carcinoma of the breast has an early period. In this stage only is it curable. To advise the woman correctly we must see her early as a patient. That she may consider herself a patient, she must know and feel the importance of her trouble. You and I must teach her this, directly or indirectly.

## II.

There are few pathognomonic clinical signs of early cancer of the breast. When such signs exist they are of value only in a prognostic way. We must depend, therefore, upon probable findings. The differential diagnosis most useful, because of its simplicity, divides all surgical lesions of the breast into mastitis and neoplasms.

The acute inflammations occur largely in the child-bearing period, and are accompanied by septic symptoms. Even if sub-acute or chronic, there should be sufficient fever, leucocytosis and tenderness to lead to exploratory aspiration and correct diagnosis. Chronic cases of mastitis may often show multiple places of involvement in one or both glands. They have a diffuse, induration-like character, and upon short periods of watching may change slightly in location within the breast quadrant.

The history of an acute mastitis during lactation may not explain all the findings present. Then, knowing well the necessity for early action, he who errs in favor of early diagnostic operation commits the pardonable sin. In the briefest summary one can say that the tumor in a patient over thirty years of age, if single, firm, and tending to attach itself to pectoral muscle, nipple, milk ducts or skin, should be considered cancer until disproven by the microscope. The very rapid-growing tumors, tending to attach themselves, but without glands, in the axilla, should likewise be looked upon with suspicion, because sarcomata as well as cystadenomata have these characteristics.

## III.

A microscopic diagnosis, therefore, becomes the all-important factor in early recognition of cancer of the breast. Moreover, the immediate decision during operation is demanded in behalf of greatest efficiency and lowest mortality. It is today almost a part of the operation-room technique. To excise a portion of a malignant tumor and wait days for a microscopic diagnosis is not a good modern surgical or diagnostic procedure. Gideon Wells, Walbach, and other cancer research men have shown experimentally how even manipulation hastens the growth of cancer cells. To cut into such a tumor and wait days would certainly be a greater evil.

Under gas or local anaesthesia, a portion or the entire single tumor may be excised. While the patient waits, frozen sections quickly made are examined. Now the responsibility shifts to the consultant pathologist or your own judgment of cell arrangement. This is no small burden, for upon it depends the simple closing of the wound or a complete amputation of the breast with radical lymphatic dissection of the field. Our master pathologists of today still depend upon piling up of cells within and without the lumen as the crucial test of malignancy. However, a detailed study of the embryonic-like cells and the differentiated parenchyma cells produced by these normally assists somewhat in the early recognition of cancer. MacCarty's method of classification into primary, secondary and tertiary hyperplasia impresses me as embodying not only a unification in nomenclature, but also simplicity and greater accuracy in recognition of the exact "status existens."

## Laboratory Diagnosis of Early Tuberculosis.

Miles J. Breuer, M. A., M. D., Lincoln.

When the search of two or three specimens of sputum from a patient whom we suspect of having tuberculosis, fails to reveal any tubercle bacilli, we are hardly justified in discharging him with the assurance that he has no tuberculosis. There are other thoracic conditions, in which the differentiation of tuberculosis from syphilitic or pyogenic infection, circulatory disturbance, or neurosis, on a clinical basis, is difficult, and the necessity for checking up with laboratory evidence arises. We wish to inquire into the methods at the disposal of the practitioner for this purpose.

We are far from having an absolute and conclusive laboratory test for incipient tuberculosis in cases where we are unable to find the bacilli in the smear from the sputum. The finding of the bacilli is positive and final; providing the man who does the laboratory work is in a position to state positively that there are tubercle bacilli. The failure to find them, even on repeated search, does not prove anything. At times, when the sputum shows no organisms, the administration of 5 grains of potassium iodide three times a day for two or three days will succeed in liberating the organisms which are enclosed in granulation tissue, and throwing them off in the sputum. When that fails, the practitioner is in a measure "up against it" diagnostically. Yet, there are methods by which he can shed considerable light on the problem.

From time to time, many tests have been put forth, discussed voluminously in the literature, and then dropped from active use and attention, until now we have a long list of them. Each writer, pleading in behalf of a new test, speaks disparagingly of the previous ones, only in turn to have his own fall into the shadow of doubt. The fact remains that each of these methods gave good results in the hands of the man who understood it, worked with it, studied it; he knew what it would do, and what value to place on its results. All of these methods are useful; we can make use of any of them with profit, if we study it and understand it. But we must understand that none of them is any magic process, which will indicate unequivocally what the condition of the patient is. Unfortunately, there are few things in diagnosis which can be interpreted absolutely and literally. For that reason, the development of a good diagnostic judgment is a difficult thing, requiring usually the attainment of a fairly ripe age on the part of the diagnostician before he can be considered much of an authority.

The point is, that we have at our disposal many laboratory tests which will shed light on the existence of an incipient or latent pulmonary tuberculosis (by that, meaning a process which is not discharging bacilli in the sputum or giving active clinical signs); but the value of each individual test is about the same as the value of an individual clinical symptom. That is, by the way, the value of any laboratory test, with few exceptions. Only a very few indeed of the laboratory tests are absolutely pathognomonic in the absence of other confirmatory evidence. The results of laboratory work must be weighed, the various factors balanced; each is but the link in a chain, and the clinical links are of equal value and importance with the laboratory links; and the diagnosis is the wounded judgment drawn from the picture it presents.

The following discussion does not by any means include all of the tests which have been advanced at various times. In making the selection, two requirements have been kept in view. We mention those tests, which while not giving an absolutely definite answer for the presence of tuberculosis, still have value enough to justify their performance; and those which are not so complicated but that they can be performed in the average clinical laboratory.

Beginning with the sputum, we may mention the various concentration methods, which have for their purpose the concentration of a few bacilli in large amounts of sputum, which might otherwise escape detection. Various methods have been used, such as that with sodium hydroxide, antiformin, etc., which have for their purpose, first, the digestion of the mucus, second, the emulsification of the mixture with a liquid of low specific gravity, as ligroin, chloroform, etc., and third, the centrifugation to a point where a scummy layer is formed between the two liquids, in which layer the tubercle bacilli are caught.

The following is a very simple method, which has been found in the writer's laboratory to give excellent results: Place 5cc of sputum in a 15cc centrifuge tube, and add 5cc of a 10% NaCl solution, and then shake in a shaking machine or by hand until it is a thin, homogeneous fluid, as free from lumps as possible. Add 0.5 cc of gasoline, and continue the shaking until the gasoline is thoroughly emulsified. Centrifuge at low speed until the gasoline forms a supernatant liquid, beneath which is a scummy layer, in which tubercle bacilli will be found, if present in the original specimen. Staining is done by the usual method, though it is advisable to use a thin smear of albumen to fix the organisms to the slide.

The presence of elastic tissue is suggestive of tuberculosis, in that it indicates destruction of lung tissue. When present in large amounts, it may be seen by the naked eye as small yellowish particles. For microscopic examination, the sputum should be pressed between two glasses. The following characteristics will differentiate elastic tissue from ordinary fibrous tissue; their undulating outline, their curling ends, their sharp edges and uniform diameter, and their intense refractivity. The presence of red blood cells in the sputum, intimately mixed with the other elements, is indicative of destruction of lung tissue, and suggestive of tuberculosis.

In every specimen of sputum, there is a greater or less number of white blood cells. In specimens from the ordinary affections of the bronchial tract, the cells are largely polymorphonuclear leucocytes. In pulmonary tuberculosis, it is common to find the lymphocyte, or small-round-cell type, with large, dense nucleus, and scant cytoplasm. The finding of a majority of these, is evidence in favor of a tuberculous infection, though we must not lose sight of the fact that a secondary pyogenic infection in a case of tuberculosis, will produce a polymorphonucleocytosis in the sputum.

The detection and estimation of albumin in the sputum has been much discussed of late. The digest of up-to-date opinion on the matter is as follows. The absence of albumin in the sputum excludes active tuberculosis as a source of the specimen. The presence of albumin, per se is not of great diagnostic significance. Quantitative relations are important. The quantity of albumin appears to be a direct index to the activity of the lesion. Albumin is qualitatively present in tuberculosis, pneumonia, pulmonary edema, pulmonary abscess, and pulmonary gangrene. It is present in all cases of pulmonary tuberculosis, and in 80 per cent of them, it is over 10% by volume. It is absent in chronic rhinitis, pharyngitis, laryngitis, bronchitis, and asthma ,or present only in traces. In acute conditions, it is absent in superficial inflammations, but present in lacerations or abrasions, or wherever there is exudation of serum.

The quantitative estimation is performed as follows: Collect not less than 10 cc of sputum in a dry receptacle, rejecting samples containing blood. Pour into a 50 cc graduated cylinder, add three times its volume of water containing 1% of acetic acid, diluting the sputum to 25 percent; shake vigorously, and allow to stand for half an hour. Filter through paper into a graduated centrifuge tube, collecting 10 cc. Add 5 cc of 5% potassium ferrocyanide (yellow prussiate) and centrifuge 5 minutes at average speed. Record the amount in volumes percent. Each 0.1 cc is 4 per cent by volume, after correcting for original dilution. The weight percent may be calculated by Purdy's method.

Intraperitoneal injection of the sputum into a guinea pig is a procedure of great value. Positive evidence from it is of the same value as finding organisms in the sputum. Negative evidence is absolute proof of the absence of the organisms in the sputum, but of course does not eliminate the presence of a tuberculous infection which is not discharging bacilli. The utmost precautions must be taken in collecting the specimen to clean the mouth and sterilize utensils, so as to entail the minimum of external contamination. A certain amount of contamination is unavoidable, but as a rule the guinea-pig resists pyogenic infection or recovers from it, but is extremely susceptible to tuberculous infection. In case the injected material contained tubercle bacilli, at the end of three or four weeks, the guinea-pig will be found at autopsy to have tuberculous peritonitis or a generalized miliary tuberculosis.

It might be mentioned that a search of the stools for tubercle bacilli would not be amiss, as it has repeatedly happened that bacilli have been found in the stools of pulmonary cases before they were found in the sputum.

The complement-fixation test for tuberculosis has been receiving considerable attention of late. Wasserman himself, after showing the value of the complement-fixation technic in the diagnosis of syphilis worked also with tuberculous sera, but found that the results were not dependable as in the case of syphilis. The fault lay in the preparation of a suitable antigen. At the present time a number of dependable antigens have been developed, notably that of Besredka, and that of Smith and Zinsser. The latter is quite simple of preparation, and has been used in the writer's laboratory with good results. It is prepared by grinding together in a mortar for one hour, 20 milligrams of dry tubercle bacilli and 90 milligrams of dry C. P. NaCl crystals, then add 10 cc of water. The dose of it is usually 0.05 cc but has to be determined by itiration.

In working with the complement-fixation test for tuberculosis, the writer has been impressed with the clear-cut reactions that are obtainable, contrasting with the frequent doubtful results and difficulties in interpretation met with in the Wasserman test for syphilis. The checking up of the results of the tests with clinical conditions has also been favorably borne out, but the writer's series is not large enough to compare with the figures which have already been published by other investigators.

A simple leucocyte count will, however, be very useful in many cases in differentiating the tuberculous from pyogenic infections. The pyogenic infections will all produce an increased leucocyte count, with the greatest increase in the polymorphonuclears. In tuberculosis, the white count will not be raised, but will, if anything, be lowered. It may be noted here, that in advanced tuberculosis, with secondary infection, there will be an increase in polymorphonuclear leucocytes, but such a condition is not difficult to discover by other means. In such cases where it is necessary to make the differentiation between tuberculous and pyogenic infection, the white count is a valuable sign.

The leucocyte classification of Arneth has been shown by a number of workers to be quite reliable. In this method, the leucocytes are classed by the number of lobes in which the nuclei are found. It is considered that the nuclei with one or two lobes are less able to combat infection than those with a larger number. The percentages of the different classes are about as follows in the normal individual (according to Kahn):

| I | II | III | IV | V |
|---|---|---|---|---|
| 5% | 35% | 41% | 17% | 2% |

First, an ordinary differential count is made. Then, 100 neutrophiles are counted and divided as above. The sum of I and II is taken as the index, making the normal index about 40. In tuberculosis this index is raised, while the percentages of IV and V are lowered. This is rather a tedious test to perform, but one will be repaid for the work, as it is about the most valuable among the secondary tests.

The diazo-reaction of Ehrlich, and the urochromogen test of Weiss, are two closely related tests performed on the urine, about the value of which there is much disagreement. Whatever may be the refinements of the differences of opinion between the various workers with these two tests, the fact remains unassailable that in a large number of cases of tuberculosis, the tests are positive, whereas they are not commonly, if at all, found in normal persons or in other diseases (with the exception of typhoid fever). They may therefore be regarded in the light of a symptom and their presence should be looked for in all suspected cases. They are very easy to perform, and if found positive, while not constituting the entire chain of evidence, form a very suggestive link. The diazo-reaction is given by an unidentified coloring matter of the urine. This substance, when oxidized by potassium permanganate, passes into urochrome or urinary coloring matter, thereby giving the urochromogen test.

The diazo-test is very well known, and the technic can be found in any text-book on laboratory work. The writer prefers the contact-ring method of performing the test, wherein the urine is mixed with the reagents, and the mixture is then layered with ammonia water, the characteristic color appearing at the ring of contact.

There has been so much disagreement as to the interpretation of the urochromogen reaction that it is advisable to use a standardized technic. The following is recommended: Put 5 cc of a one-third dilution of the urine (1 part urine and 2 parts water) into each of two test-tubes, so that the column of liquid is 3.5 cm deep. Hold over a strong white background, and place 0.1 cc of a 1:1000 $KMno_4$ solution in one of the tubes. Hold the tubes vertically, and looking into them from the top, record any increase of yellow at the end of the 30 seconds as a positive urochromogen reaction.

A test for the presence of tuberculosis is based on the fact that salicylic acid, when present from the blood, appears in inflammatory exudates from the lungs, but is not secreted from intact bronchial mucosa. This will aid us in differentiating processes which are limited to the bronchial mucous membrane from those which have extended into the lungs. The patient is given 30 grains of salicylic acid, and the sputum is collected for twelve hours. The sputum is tested for salicylic acid with a 10% solution of ferrich chloride. A violet color indicates a positive reaction.

In conclusion, mention may be made of the value of the tuberculin reaction. The von Pirquet intracutaneous method is the only one used at this time to any extent, as the other methods are either unreliable or dangerous. A negative von Pirquet test is of value in ruling out a tuberculous process, provided that we have a control to check up the potency of the tuberculin used. This is not difficult, as it will be seen in the light of later statements that we will not have to go far to obtain a positive von Pirquet test. Therefore, in general, a negative von Pirquet test is of value. A positive von Pirquet, on a child say up to ten or twelve years of age, is of value in indicating an active lesion. But in an adult, a positive von Pirquet test is quite without value in proving the presence of an active tuberculosis. Statistics from various post-mortem rooms give between 75 and 90 per cent as the proportion of adult persons examined who have at some time or other had tuberculous lesions in the lung. The great majority of these have been overcome by the patient's resistance and healed perfectly without the patient's ever having been aware of it; the majority of these persons had never had the least reason to believe that they were tuberculous, and were brought to to the post-mortem room by other diseases. A positive von Pirquet reaction will persist for a long time, often many years after a small focus of this sort has healed entirely. Therefore, to obtain such a reaction, means that at some time or other, the patient has had a tuberculous focus in the lung, the size and activity of which may or may not have been very limited, and which may or may not have completely disappeared long ago.

At the risk of seeming to repeat uselessly, we cannot refrain from stateing again, that a negative result in most of the tests above mentioned is not equivalent to an indication that the patient is free from tuberculosis. Neither is the positive result of a single test sufficient to establish a diagnosis. This does not apply to the tuberculin test, which has been explained in detail; and it does not apply to the complement-fixation test. From the data at present on hand, we are inclined to believe that the tuberculous complement-fixation test is fully as valuable in the diagnosis of tuberculosis, as the Wasserman test in syphilis, and quite probably much more definite and accurate.

In general, however, the idea is to consider the patient very carefully, and as completely as possible, both from a clinical and a laboratory standpoint. We would not let any individual symptom influence us one way or the other, but the entire picture is decisive enough. It is therefore advisable to perform as large a number as possible or practicable of the laboratory tests. When we have evidence of three or four of them in the same direction, especially if supported by strongly suggestive clinical signs, we cannot afford to overlook it. When three or four tests, depending on different principles, say for instance, on blood, urine and sputum, agree on the same side of the diagnosis, the combination of results is evidence powerful enough to justify our basing our treatment of the patient on the verdict.

---

## Flat Feet.*

J. E. M. Thumson, A. B., M. D., Lincoln.

During the past twelve months I have had the opportunity of examining 498 pairs of feet. Of these, 154 were applicants for the several officers reserve training camps, 127 were applicants for the National Guard, 56 were private and referred patients suffering from symptoms of foot pathology, 161 were private patients who were in the hospital under my care for conditions other than their feet. However, in considering any of my figures and percentages in forming conclusions, a source of error must be considered, since, of the total number examined, over 10% were selected cases, with definite foot symptoms. Further, in this paper, elaboration is sacrificed to obtain brevity, simplicity, and clearness, the observations are purely personal, based entirely on the cases before mentioned.

Flat feet are symptomatic and non-symptomatic, that is painful or without pain, and under the same term, on account of the lay interpretation of it, should be considered the so called weak feet which show slight or no evidence of actual flatness, but often cause very severe symptoms. Painful flat feet occur most often during and following the period of adolescence. 86% of my cases have been between the ages of 14 and 25 years. They were more prevalent among persons working on tile or wet floors; or where there was but small walking radius.

Flat feet without pain were more frequent among farmer boys and college students, particularly in the over grown type of youth who was abnormally adipose or mature for his age. For the sake of convenience I record all feet according to the appearance of the weight bearing sole. The method used is simple. Sheets of paper are painted with solution of tannic acid then allowed to dry. The sole of the foot to be examined is moistened with a weak solution of tincture of ferric chloride. The patient steps on and off the dried sheet, leaving a print of the sole as the foot carries the body weight.

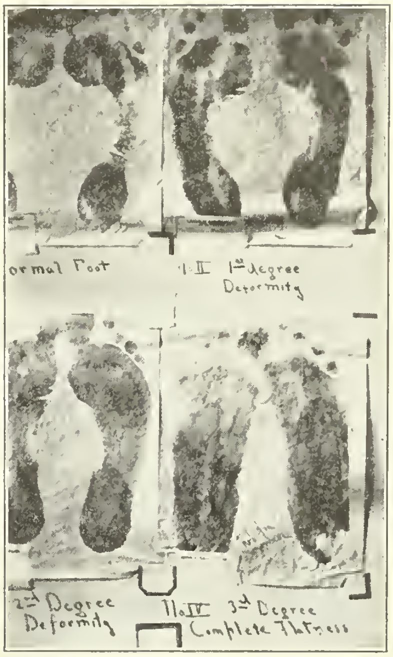

ormal Foot
No. II 1st Degree Deformity
2nd Degree Deformity
No. IV 3rd Degree Complete Flatness

Fig. I.

The figures demonstrate the classification I use. No. 1, a normal foot; No. 2, first degree; deformity may or may not be normal for the particular case, that is I consider it pathological only when accompanied by symptoms as evidence of weakness. No. 3, second degree is characteristic of the flat foot, which causes most severe symptoms though such a foot may never cause the slightest discomfort, as is also true of No. 4, third degree, which is in reality a completely flattened foot, with loss of normal figurative contour.

Of the practically 500 cases, 37% were of the normal type. Of this number 8.1% gave symptoms of weakness, 24% were of the first degree group. Of these 16.6% gave symptoms. In second degree group were 26% of which 34.5% gave symptoms. In the third degree group were 9%, of these 66.6% gave symptoms, 4% of the total had one foot in one group and the other in another, 75% of these had pain in one or both feet.

For persons having flat feet without discomfort, treatment of the deformity is generally a failure, because it is hard to obtain proper cooperation and all efforts result in but slight correction, much to the dissatisfaction of the patient.

Those patients giving a history of pain in the heel, instep, tarsometatarsal joints, in the calf, knee, thigh, and sacro-iliac region, exaggerated by walking, standing and bending, and relieved by rest, associated with foot deformity, are the class of patients who appreciate the real benefit of proper treatment.

Inspection may reveal very little, unless there is a marked degree of loss of contour in the longitudinal arch, with abduction and eversion of the feet. This will be accompanied by a falling of the axis of the leg inside the heel which is evidenced by the deviation outward of the normally perpendicular tendo achillis. Calluses are prevalent on the soles. Tender points are encountered about the ankle, medico-tarsol, and tarsometatarsal joints, also about calluses.

In these conditions of the foot the pathology is limited to stretching of the dorsoflexors, and contraction of the opposing plantar flexors, particularly the peroneu, the soleus and gastrocnemius with corresponding stretching and contracting of all the ligaments, resulting in the marked bony and articular changes.

For practicability of treatment, one may consider all flat feet as either flexible or ridged. By the former is understood, those feet with by manipulation and retention can be returned to their proper function. By the later is meant feet that cannot be manipulated, due either to muscular spasm or ossius change, and which require operative measures under anaesthesia to restore normal stability.

In practically all mild cases, my first procedure is to have the inner side of the heel raised from ¼ to ½ an inch. This tends to invert and adduct the formerly everted and adducted foot. In all of my 56 treated cases, this alone relieved all symptoms. Where this fails, strapping is necessary and is also a routine procedure in all more severe cases. It is my custom to use four adhesive straps, two of which are about two inches wide, the other two are about one inch wide, each being 30 to 36 inches in length. With the patient seated on a table the legs hanging over the side and the operator on a low stool, the process of strapping the feet is accomplished with ease. A long adhesive strap is drawn from the planter surface of the little toe across the tarso-metatarsal joints around the base of the big toe, the end being held by the patient. The left heel is grasped firmly in the palm of the operator's right hand (vise versa for the right foot), the left hand grasping the tarsus of the foot, inverting, adducting and dorso-flexing to the limit of flexibility. The foot is retained by the patient in this position with the toe strap previously applied.

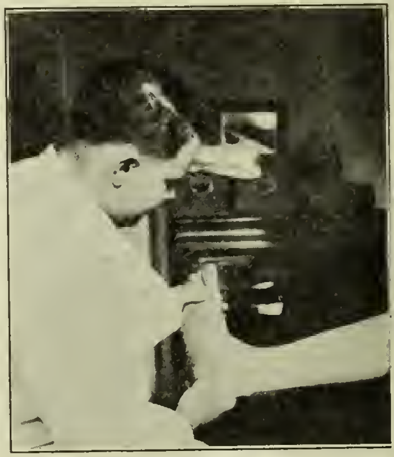


Fig. II.
Position in which foot should be held for straps.

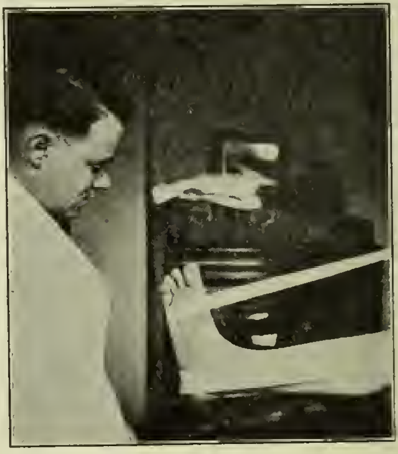


Fig. III.
Lower wide strap supporting heel.

The first wide strap is placed just behind the medio-tarsal joint and brought as tightly as

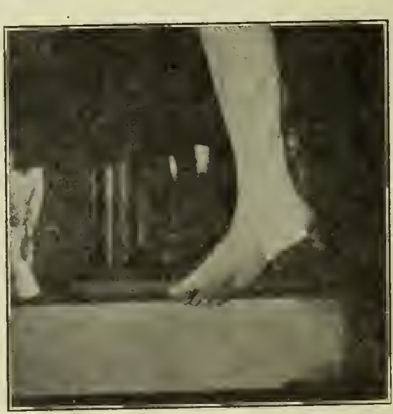


Fig. IV.
Foot completely strapped.

possible straight up on either side of the leg to the upper fourth. The second wide strap is placed just in front of the medio-tarsal joint crossing the dorsum of the foot, forming a figure of eight around the leg. The smaller straps are used merely for retaining purposes. A gauze bandage is applied tightly in order to promote better adherence of the plaster to the skin.

This retains the foot in a very uncomfortable, over corrected position, but generally within a few days the pain is entirely relieved.

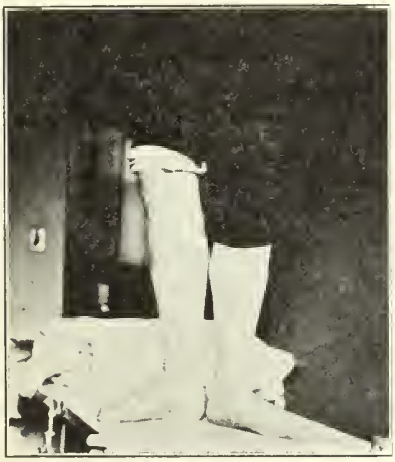


Fig. IV.
Right foot strapped bearing weight.

Strapping must be repeated once or twice a week for from four to six weeks, during which period the employment of foot, toe and walking exercises are beneficial, as are also alternating hot and cold packs, followed by massage. The feet are then cast and from the casts are made simple steel insoles. These should be worn from three to six months. By that time restoration of muscular equilibrium should be complete, and the patient should gradually be allowed to walk without the supports. At the slightest recurrence of symptoms, straps and insoles should be again used.

Of the fourteen cases during October, November, December, 1916, but two are wearing their steel insoles at this time. Ridged feet that do not respond to strapping should be forcefully corrected under anaesthesia. This operation is indeed conservative, but in most severe cases accomplishes most happy results.

The inner plantar surface of the foot is placed across a padded triangular wedge, the heel and dorsum of the foot are firmly grasped, pressure is made, thus forcibly causing inversion and adduction. If this is not sufficient, with a felt hammer the tendo achillis may be stretched, thus aiding in dorso-flexion. If sufficient correction is allowed the foot is placed in plaster cast, extending from the tip of the toes to the knees. The patient is allowed to walk in the casts for four to six weeks when they are removed, straps are applied and treatment continued as in flexible flat feet.

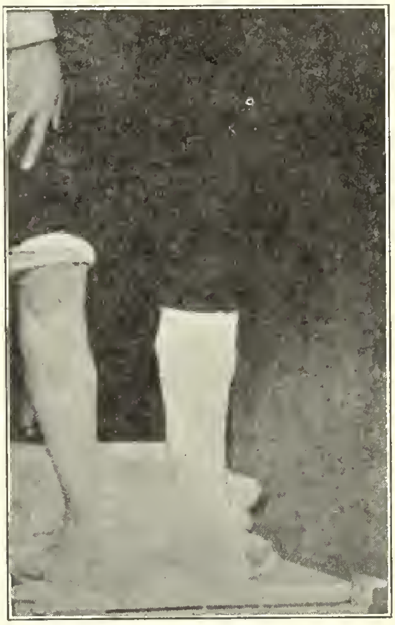


Fig. VI.
Left foot in plaster.

There are extreme cases in which tenotomy of the tendo achillis, and peroneii aid greatly in attaining more accurate correction, but I have experienced but two cases where this procedure was necessary. In all but one of my cases, the results, have to the present time, been indeed gratifying.

### Fracture of the Os Calcis.

J. W. Duncan, M. D., Omaha.

The first case of fracture of the os calcis treated by the writer, was an employee of a brewery. He was seen in the street walking with a cane one year after the injury. I had knowledge of a suit instituted against his former employer for damages and assumed

(Continued on page 92)

THE NEBRASKA STATE MEDICAL JOURNAL

Published monthly by The Nebraska State Medical Association.

Irving S. Cutter, Editor.....Omaha
A. F. Tyler, Associate Editor.....Omaha
J. M. Aikin, Business Manager.....Omaha
Room 468 Brandeis Building.

Publication Board.
F. A. Long, Chairman.....Madison
W. O. Bridges.....Omaha
B. F. Bailey.....Lincoln
J. M. Aikin, Ex-Officio.....Omaha

Subscription $2.00 Per Year. Single Copies 20c Each

Address all communications to J. M. Aikin Business Manager, 468 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. III. March, 1918. No. 3

## Our 1918 Annual Meeting.

Our 1917 membership totalled 1138. Up to date, 788 members have paid their 1918 dues. To date the number of physicians in Nebraska recommended for commissions in the M. O. R. C. is 330. To this list should be added the roll of those serving in our Regular Army, which number we cannot certify. Among this number are M. S. Moore, president and I. H. Dillon, secretary, of our Council. Lucien Stark, one of our vice presidents and also a member of our Council, John B. Potts and possibly other members are already in the service of the government. Their places must be filled (see Constitution and By-laws, Ch. 7, Sec. 5). We earnestly hope to maintain our 1917 record for memberships. New members should be sought and enrolled. Many counties are remitting dues for their members who are absent in the service of the government. We hope our Councilors who remain at home will exert unusual efforts to maintain the former quota and add new members who are acceptable, to our 1918 roster.

In the fifty years of our Nebraska State Medical Association activities, no one year has equalled the present in necessity for co-ordinate action to unify our powers for efficiency in official and private practice.

To shorten the time our members would be absent from their private practice in attendance at our State Association meeting and without curtailing the time desired for our scientific program, the House of Delegates is called to meet Monday, May 6th, 1918, at 7 p. m. in the Fontenelle Hotel, for organization and the transaction of such business as may properly be considered at that time. This plan will permit both forenoon and afternoon scientific sections Tuesday and Wednesday. The Committee of Arrangements have wisely suggested for the Tuesday evening session a war program, and for Wednesday evening a banquet followed with addresses by speakers chosen for the occasion, as our final session. The presiding officers will set the example for promptness in attendance at the hour set for business and scientific meeting. County society officers are requested to make sure that their delegates are properly certified on blanks at their disposal to a seat in the House of Delegates. Each Councilor (Chapter 7, Sec. 2, Constitution and By-laws) is responsible for a report from his District to the House of Delegates. The Nebraska State Medical Association makes the calendar year the fiscal year of the Association, hence all reports should cover the year ending December 31st, 1917.

Chas. H. Mullins, President.
Joseph M. Aikin, Secretary.

## Beware of Swindlers.

No doubt you have seen the several notices, under "General News" in the Journal A. M. A. in several recent issues, entitled "Once more a warning." These refer to swindlers operating in different sections of the country, various letters having been received from victims in Ohio, Colorado and other widely separated states. Now comes a letter from the well-known publishing house of W. B. Saunders Co., of Philadelphia, saying a man under the name of E. T. Rogers, claiming to represent the University Progressive Club of Cincinnati, for medical and other journals, has been victimizing physicians in Illinois; and the same subscription swindlers, or another under the name of Robert Wayne, has been relieving physicians of their well earned cash in the region of Gary, Ind. It is believed there is concerted action, perhaps by an organized band, being taken at this time of the year, to victimize physicians on so-called "subscription" schemes. Every physician should decline to pay any money by check, or otherwise, to subscription agents not personally known to him, or for whom other physicians cannot vouch. Many of these so-called agents operate under the guise of students "working their way through college."

---

### Blood Chemistry and Medical Progress.

The third Mellon lecture delivered by Professor Folin under the auspices of the Society for Biological Research of the University of Pittsburg is entitled, "Recent Biochemical Investigations on Blood and Urine; their Bearing on Clinical and Experimental Medicine." A brief abstract of this lecture will indicate, from an authoritative source, the trend of present day biochemical investigations. Professor Folin states that progress in the development of any experimental science is more often due to the discovery of new methods than to new or more ingenious applications of old ones. In the science of biochemistry in the last few years there have been very great changes in the methods used for the analysis of urine, while the advancement in the field of blood analysis has been even more remarkable. The foremost characteristic of the successful modern analytic method is speed. Any analytic method in urine analysis which cannot be finished within less than two hours stands in need of further revision. It is only when we come down to the very shortest of biochemical methods that they begin to appeal to clinicians. Furthermore, such methods must be simple and easy, as well as quick, before they can find any very wide-spread and sound applications within the medical profession.

A second characteristic of modern analytic technic as distinguished from the old, is the tendency to make the methods microchemical. Formerly a full twenty-four hour quantity of urine was scarcely large enough to permit a complete analysis. Today ten cubic centimeters of urine is abundant for a determination of all the more common nitrogenous constituents. Before the introduction of microchemical methods one could hardly say that there was such a thing as quantitative blood analysis. Even for a qualitative test for uric acid in blood, from 100 to 200 c.c. were required and then positive results were obtained only with blood abnormally rich in uric acid. Today, if necessary, we can make the determination with 5 c.c. or less.

The merit of the newer microchemical system of blood analysis was convincingly demonstrated in connection with studies on the problem of protein absorption. For more than a generation different investigators had tried over and over again to demonstrate the nitrogenous digestion products in the blood stream, but had failed, and we had nothing but unproved hypotheses with which to explain the absorption of albuminous food. This problem became acute when it was shown by Kutscher, at the beginning of the present century, that the pancreatic digestion is capable of completely destroying the protein character of albuminous materials. The earlier investigators worked with anywhere from 100 c.c. up to several liters of blood in attempts to solve this problem, and failed. Working with from 2 to 5 c.c. of blood by the micro methods it was shown with absolute certainty that the old hypotheses were false, that the simple digestion products elucidated by Kutscher were readily and rapidly absorbed. The products could be traced through different parts of the circulation and even into the various tissues of the body.

The methods are equally applicable to the determination of the waste products produced within the tissues. In studying these phenomena, the results were as clear as if we had actually seen the digestion products (the amino-acids) pass into the blood and into the tissues, there to linger awhile and finally break down and yield urea. To any one who has actually followed this process, there can be no doubt as to the essential features of protein metabolism, and the ability of muscular tissues to form urea. Nor can there be any doubt about the important fact that metabolism products pass with great speed and readiness from the blood into the tissues, and vice versa.

We are still in the early stages of a pioneer period of research opened by means of all this new technic, but it is clear that much research lies ahead of us with reference both to physiologic and clinical problems. There is, for instance, no doubt that in case of strictly normal persons the nonprotein nitrogen content and the urea content of the blood are low. The nonprotein nitrogen will not exceed 28, or at the most 30 mg per hundred c.c. of blood and the urea nitrogen will be almost exactly half of the nonprotein nitrogen. It seems a matter of considerable importance that we have to accept as normal considerable higher levels just as soon as we begin to work on hospital patients. Here values lying between 30 and 40 are quite as common as values under 30. There can be no doubt about the fact that efficiency of the kidneys is the chief factor which determines the level of waste products which any individual carries in his blood and tissues. The higher level of waste products found among hospital patients must therefore indicate that at least one-half of these persons have kidneys which are no longer perfect, kidneys which at one time or another and in one way or another have been damaged.

Urea is believed to be harmless, and it is certainly true that a good many nephritic patients can go about feeling perfectly well and yet carry as much as 100 mg. of urea nitrogen in their blood, while others go into so-called uremic coma without carrying any unduly high levels of nonprotein nitrogen or urea. Uremic attacks with low levels of blood nitrogen happen perhaps most frequently in cases of so-called toxic pregnancy. We have analyzed the blood of about 100 pregnant women, most of them clinically normal. From the class of patients to which these women naturally belong we should expect to find substantially the same rather high level of nonprotein nitrogen and urea as we find in other hospital patients. Such is not the case. Very few pregnant women, except the toxemic ones, give a nonprotein nitrogen over 30 mg. per hundred c.c. The more interesting fact, however, is that the urea of the blood obtained from normal pregnant women is practically without exception very much smaller than the amounts of urea found in other normal blood.

Determinations of nonprotein nitrogen and urea in blood have proved the most popular with clinicians because these determinations stand for concepts which to them are perfectly clear. These methods themselves, are colorimetric in character serving not only for the determination of urea, ammonia, uric acid, creatin and creatinin but, in addition, we have Bloor's micromethods for the lipoids-fat, lecithin, and cholesterol; Marriott's nephelometric methods for the acetone bodies; Benedict's method for blood sugar, and Lyman's very recent method for calcium. The remarkable thing about this series of methods is that they are devised with reference to a single instrument, the colorimeter.

Scientists of earlier generations discovered a great many facts in the realm of metabolism and of medicine. It will be found upon scrutiny, however, that their discoveries were accidental or of such a character that they were bound to be made by one or another reasonably keen observer. The surface problems have been solved. It is now only by means of finer and ever finer technic that progress can be made toward the solution of the many metabolism problems which must be solved in order to secure an increasingly better basis for clinical, experimental and above all, preventive medicine.

---

### Fracture of the Os Calcis.

(Continued from page 89)

the cane and the limp were a necessary complement to the suit rather than a vital aid to his locomotion.

He never recovered damages chiefly because entirely honest medical witnesses maintained no permanent disability existed, nor indeed was there any disability existing ten or twelve weeks after the injury. Six month after the injury an honest and competent surgeon certified to a local consul his ability to return to the continent for military duty.

The disability occasioned by calcaneal fractures of any degree has not, in my opinion, been appreciated by the profession. It is doubtful in my mind, after a rather large experience in fractures of this bone, if any individual ever recovered sufficiently to enable him to partake in military activity of any type.

All our cases have been caused from a fall from a height, the individual alighting on the heel. One case the man fell twenty-five feet and fractured both os calces and the astragalus in one foot. Another was thrown from a delivery wagon on a street car rail, giving rise to one of the worst fractures of the os calcis we have treated.

None of our cases have been compound and nearly all have been comminuted. A great many are impacted and the fracture extends into the calcaneo-astragaloid joint. There the multiple lines of fracture in all the plates we have examined. It can not be said that any particular mechanism gives rise to any particular type of calcaneal fracture and indeed an effort to classify the fractures has met with failure at our hands.

Cabot and Binney attempted to classify calcaneal fractures. Cotton remarks that this is about as useful as classifying the cracks in a nut after the nut cracker is through with it. Lounsbury likewise attempts to classify them. There are no definite lines of fracture. The damage is of a crushing and spreading character, the bone seems shattered. The damage done is not confined alone to the osseus structure for the mechanism of production and the structural anatomy must predicate a damage to the longitudinal arch which is, in itself, of considerable moment.

Subjectively, at the time the injury is sustained little complaint is made and in nearly every case the individual refers in the main to the ankle. There are no constant signs. Chief seems to be the loss of lateral mobility of the ankle joint and in the absence of a skiagram the condition is diagnosed and treated as a sprained ankle.

The diagnosis must be clinched, of course, by the roentgen-ray but given a fall from a height, alighting on the heel, with a widening beneath the external malleolus and a loss of lateral mobility the diagnosis seems assured. The ancient cases are truly and permanently disabling in a great number of cases. The gait seems not unlike that of a gonorrhoeal heel, or of calcaneal spurs. In those cases in which there has been considerable widening of the bone, pain is complained of underneath the external malleolus due to the impingement of the bone on the fibula. This, with the damage done the longitudinal arch gives a tendency to walk on the outer surface of the foot. My belief is that the amount of disability depends not so much on the upward displacement of the tail of the bone as upon the lateral broadening. Crepitus cannot be obtained excepting rarely for most of the fractures are impacted. Up and down motion seems good in the great majority of cases but those cases in which the damage has extended into the calcaneo-astragaloid joint lateral mobility is impaired or destroyed.

In 1907 Cabot and Binney advised "attempts to improve the position of loose fragments" and remarked that "little damage can be done by manipulation in impacted cases." Not critically we may state that the reposition of loose fragments must be academic. Likewise we must agree that manipulation can do no harm in impacted cases nor indeed, in unimpacted cases. Surely no method of treatment could give less satisfactory results than those obtained heretofore. A skiagram, a plaster cast, and eight to ten weeks inactivity, gives notably unsatisfactory results in the majority of cases.

To Cotton belongs the credit, I believe, for having devised a treatment obtaining and maintaining a correction of the deformity. It promises much. He summarizes it as follows:

1. Loosen the fracture by manipulation.

2. Pull the heel down, using either a steel urethral sound or ice tongs in front of the heel cord.

3. Free the joint motion between the os-calcis and astragulus.

4. Push in the displaced bone underneath the external malleolus thus narrowing and shaping the whole bone. We do this by striking with a big mallet on the outer side of the foot and padding with felt to take up the blow, supporting the inner side of the foot on a sand bag. This impacts and owing to the fact that the outer plate of bone is firm the impaction is usually fairly solid.

5. We put the foot up in plaster cast, not at right angles but with the heel cord slack; also we avoid direct pressure on the heel. It is well after impaction again to test the lateral mobility and if impaction has impaired it to loosen it and reimpact.

The writer has tried this method in three cases, all too recent to determine results. It is easily carried out. Manifestly one can be hopeful of as good results as under the old method of treatment or rather lack of treatment.

Cotton does not state the length of time elapsing before the patient is allowed to place weight on the foot. In none of our cases has it been less than sixty days. His results in old cases do not warrant much optimism. A removal of a wedge of bone under the external malleolus might relieve pain which seems often to localize here.

I have found the use of a rubber heel and an arch support of some type beneficial in old cases. I now have a case of fracture of both os calces treated by Cotton's method and I am awaiting the outcome with interest.

## Rapid Methods in Tissue Diagnosis.

Miles J. Breuer, M. A., M. D., Lincoln.

With the paraffin and celloidin methods of embedding pathological tissues, it requires a period of from two to five days before the section is ready to be examined. When the examination is done for academic purposes, this makes little difference, but in cases in practice where subsequent surgical operations depend on the diagnosis, and where two or three days required for transit are added to the period of waiting, there is a delay of a week or more before the diagnosis is heard from. This is not merely a matter of convenience. Very often the promptness of the diagnosis has much influence on the patient's welfare. Therefore, when rapid methods of tissue diagnosis were introduced, they were eagerly welcomed. It is now possible to turn out within a half an hour from the time the specimen is removed, a section stained in the usual way, permanently mounted, and showing all the histological structures as well as or better than the older methods.

The freezing of fresh tissues for sectioning was first introduced for operating-room use, in order that a section of tissue removed by the surgeon might be reported upon before the operation was finished. By this means the surgeon was able to decide upon the extent of operation necessary. For the purpose of freezing the tissues to a consistency at which thin sections might be cut, ether, ethyl chloride, or other highly volatile substances or mixtures of them, were made use of, with or without special freezing apparatus. The expense of these procedures was justified by their emergency use, but was too great to permit of their routine use in laboratories where extreme haste was not imperative.

Liquified carbon dioxide has furnished us with a means of freezing which is not prohibitively expensive. At present this method is finding great favor, and is being introduced in most progressive hospitals and laboratories. By its means, a block of tissue a half an inch long by a quarter wide and thick can be frozen in one minute, and sufficient sections for examination can be cut in another minute. The ordinary drums of liquified carbon dioxide that are used at soda-fountains and bottling works, can be used for this purpose. A special piece of apparatus is necessary for freezing the tissue, consisting of a small corrugated disc under which there is an expansion chamber connected with the gas drum. The expansion of the gas in this chamber produces the low temperature. This freezing-chamber is substituted for the regular mounting-block of the microtome, and the tissue frozen in place on the microtome. A number of short blasts of gas with intermissions between is more economical and effective in freezing a block than a continuous blast.

Almost any type of microtome will section frozen blocks, but certain types are preferable. An ordinary plane-iron, sharpened to a razor edge, and run on two tracks of slate, marble, glass, or agate, between which the block is mounted, is the form of apparatus formerly used when frozen-section work was done on specimens in which it was desired to stain fat, lipoids, or other substances which were soluble in the embedding reagents. The Spencer microtome, with its rapidly movable knife, is peculiarly adapted to the cutting of frozen material. Sections may be made with this microtome or with the plane iron, if properly sharpened, just as thin and just as perfect as with embedded material. We wish to emphasize the fact that with this method, in the attainment of such enormous increase in rapidity over the older methods, there is nothing whatever sacrificed in the way of results, within the limitations of the method. The paraffin method possesses advantage for serial sectioning, and for extremely thin sections, which cannot be equalled by the celloidin or the freezing methods. It must also be borne in mind that the knife must be kept extremely sharp, which requires constant attention, and that the strokes of the blade must follow each other rapidly, so that the surface of the block does not melt after one section has been cut, and before the knife reaches it again for the next.

Fixation may be done before freezing. This is the preferable method when tissues are sent to a distance for diagnosis. They are best preserved in 10% formalin. Tissues on which a quick report is desired should not be fixed in alcohol—or glycerine—containing fixatives. Tissues containing alcohol or glycerin cannot be frozen until these substances are removed, which may require from three to twenty-four hours. Chromium containing solutions, such as Zenker's can be used as well as formalin.

For tissues which can be examined at once after removal from the body, it is best to freeze the block first, and place the cut sections in formalin. Fixation is complete in five minutes, and staining can be proceeded with.

There are certain tissues which are different to handle by the frozen method. Tonsils, lymph-nodes, tumors undergoing degeneration, cysts, colloid goitres, in fact any tissues which are brittel or friable, or consist of fragments not held together by connective tissue, are difficult to handle. The freezing and sectioning is done readily enough, but after the sections thaw out, they fall to pieces in the handling. In such cases, the block must be embedded in celloidin or paraffin, providing a stroma, so to speak, to hold the elements of the section together during handling.

There are various methods of staining frozen sections. Formerly it was the practice to stain the section, either with or without a short fixation in formalin, in methylene-blue. This brought out nuclei, but not cytoplasm or intercellular material. Such sections were not as clear as double-stained sections, but sufficiently definite for a person acquainted with the topography, to recognize pathological conditions. Recently, polychrome-methylene-blue has been used for staining the living section, which brings out the tissue in three different colors. In our laboratory, the methylene-blue method is used in the operating-room cases where a report is desired before the operation is finished; but for routine work, the eosin-haematoxylin method is made use of.

This staining-method can be adjusted so that it is quite rapid. By trial, the maematoxylin solution can be made of such a strength that it will stain sufficiently dark in from two to five minutes. It is not possible to give a formula for making this up, for the staining properties do not seem to depend directly on the strength of the solution; the properties of the different batches of stock solution differ from each other. The method of trial is the only way of arriving at the proper strength. The eosin can be likewise adjusted so that it will stain in from fifteen to thirty seconds without overstaining. After the reagents have once been adjusted, the entire process of fixing and staining need not require over fifteen or twenty minutes, especially after the different steps of the process have been practiced up so that they follow each other smoothly.

Special staining methods can be carried out on frozen sections as well as on embedded sections. We have carried frozen sections through most of the special staining processes in common use, and find the results indistinguishable from embedded section work.

---

## Base Hospital List Complete—Enlisted Personnel of Nebraska Unit Finished.

The enlisted personnel of the University of Nebraska Red Cross base hospital No. 49, to be ordered into service in about two months, has been completed.

The list of nurses was published some time ago.

This is the list of men connected with the institution:

### University of Nebraska Base Hospital No. 49 Personnel.

Director—A. C. Stokes, major, Omaha.

Surgical—C. A. Hull, major, Omaha; J. B. Potts, Omaha; J. B. Patton, Omaha; J. R. Nilsson, Omaha; Oliver Chambers, Rock Springs, Wyo., captains; James E. M. Thompson, Lincoln; Abraham Greenberg, Omaha; John S. Sims, North Platte; Robert C. Panter, Dorchester, lieutenants.

Medical—Edson L. Bridges, Omaha, major; G. W. Dishong, Omaha; James C. Waddell, Pawnee City, captains; Clyde C. Moore, Omaha; Henry E. Flansberg, Lincoln; Leonard O. Riggert, Omaha; Durard B. Park, Laramie, lieutenants.

Laboratory—Edward W. Rowe, Lincoln, captain; George W. Covey, Lincoln; Miles J. Breuer, Lincoln; Sanford Gifford, Omaha, lieutenants.

Dental—George M. Boehler, Alma, lieutenant; Frederick W. Webster, Lincoln, lieutenant.

### Civilians.

Registrar—Victor Dietz.

Laboratory Technicians—Eva O'Sullivan, Miss McNaughtin.

French Interpreter and Stenographer—Anne Gifford.

Dietitian—Murial Rusland.

### Enlisted Men.

Ivan D. Alkire, Julius Arkin, Edward S. Arnold, Jack Austin, Henry E. Bastian, Edward J. Bierman, Marcus D. Bramon, jr., George M. Buffington, Walter P. Campbell, Charles R. Connolly, Mike H. Dally, Stanley Davies, Walter M. Finch, Roger Fitzgerald, Robert Fluhr, Edgar M. Fuller, Marlin H. Fuller, Knute S. Gronstal, John F. Hazen, G. Russel Henning, David S. Harvey, John M. Higgins, Wayne W. Hoffman, Elof Josperson, Carl A. Johnson, Leland Johnson, William A. Jurgensen, William Jungclass, Joseph Kocum, Albert Koehler, Ike Levy, Carl A. Lewis, Ralph B. Little, Gilbert Loomis, Maurice Loomis, Henry B. McCall, Grant L. McFayden, Karl N. McMullen, Gerald McNamara, Joseph F. Micek, George Morris, Julius M. Newman, Clyde G. Nicholson, Gustave Nilson, John L. McConnell, Fred Olson, Charles A. Ownes, jr., Charles P. Pease, Royal Peterson, Frank V. Rhodes, Louis O. Remillard, Harry W. Roberts, Oscar B. Rohlff, Louis A. Rubin, Gordon Ruth, Frank B. Sanders, Abram Segall, Vern Smith, Leigh C. Steavenson, Louis Storz, Emil Truelson, Morris M. Warshawsky and Clarence E. Winters, all of Omaha.

Carl O. Almquist, Loomis; Oscar B. Anderson, Lincoln; Daniel C. Arnot, Lincoln; Peter L. Bauer, Scribner; Peter J. Blair, Mondamin, Ia.; Charles R. Bowen, Columbus; Thomas J. Brennan, O'Neill; Joe Brown, Wahoo; Jesse P. Browne, Lincoln; William E. Bullock, York; Philip S. Burnham, Lincoln; James W. Colton, Lincoln; Harold H. Copeland, Beaver City; Paul Conner, Stratton; Paul E. Conrad, Lincoln; Fred J. Creutz, Wausa; Irving R. Dana, Lincoln; James A. Daugherty, Pawnee City; Almond D. Davison, Dorchester; Marlin K. Drake, Lincoln; George D. Driver, Battle Creek; Herschel A. Fanton, Lincoln; Paulus F. Falck, Lincoln; Gustave O. Fuchs, Stanton; Samuel A. Garlow, Avoca, Ia.; Everett J. Garrison, Summerfield, Kas.; Gilbert W. Goddin, Richmond, Va.; Richard S. Grant, Beatrice; William E. Hardy, Lodgepole; Lewis A. Harrington, Lincoln; Walter M. Herbert, Lincoln; Paul F. Hoffman, Lincoln; Charles R. Housh, Norfolk; Cyril J. Hrbek, Lincoln; Loren E. Hunt, Rock Rapids, Ia.; Alfred I. Reese, Randolph; Charles Rutherford, Aurora; Leslie E. Sauer, Strang; Wallace M. Scott, Stromsburg; Theodore L. Shaffer, Beatrice; Edward Simanek, Prague; Alaric R. Swanburn, Wahoo; Myril R. Swanson, Lincoln; Carelton S. Taylor, Lincoln; Myril M. Vanderpool, Lincoln; Anton F. Vasina, Prague; Chester F. Way, College View; Walter E. Webb, Table Rock; Carl Webber, Calumet, Okla.; Willard Wertman, Milford; Harlow Wetherbee, Lincoln; Robert M. White, Lincoln; Taylor N. Withrow, Lincoln; Ivan H. Worley, Lincoln; Lowell D. Worrall, Wahoo; James Wright, Fremont; Lawrence B. Jewett, Lodgepole; Julius M. Johnson, College View; Myron V. Johnson, Lincoln; Nohne Jurgensen, Bellevue; Dominik B. Kantor, Loma; Charles L. Kemper, Albion; Lloyd W. Kerlin, Fremont; Otto R. Kring, Wahoo; Frank Kohn, Beaver City; Leon A. Kuebler, Lincoln; Harold Kraybill, Abilene, Kas.; Mason C. Lawrie, Pawnee City, Charles W. Lesh, Lincoln; Walter P. Loomis, Denver, Colo.; Martin C. O. Lundholm, Lincoln; Howard B. McClintock, Albion; Ward McKellips, Albion; John H. McMillan, Hunnewell, Mo.; James W. Meadows, Long Pine; Lloyd R. Meduna, Wahoo; Clarice B. Morey, College View; John D. Neal, Omaha; Arthur Newcomb, Indianola, Ia.; Frank S. Ostertag, Lincoln; Hugo M. Otoupalik, David City; Chester L. Patterson, Beatrice; Alvin A. Petersen, Lyons; Russell K. Pierce, Fremont; Laird I. Potter, Lincoln; Edgar L. Prouty, Alvo; John W. Redelfs, Lincoln; Lammert H. Redelfs, Lincoln.

---

## Nebraska State Medical Association.

Preliminary Program for May 7, 8, 1918, Meeting.
Fontenelle Hotel, Omaha.

### Tuesday, May 7, 1918—Nine A. M.

1. Address by Chairman of Surgical Section, C. A. Roeder, Omaha.

2. Results Local and General Following Tonsillectomy, L. B. Bushman, Omaha.

   Discussion—W. O. Bridges, Omaha; F. S. Owen, Omaha.

3. Accessory Sinus Infection, S. G. Zemer, Lincoln.

   Discussion—W. L. Dayton, Lincoln; D. H. Carson, Grand Island.

4. Results Local and General Following Removal of the Septum, Turbinates and Drainage of the Sinuses, W. P. Wherry, Omaha.

   Discussion—J. I. McGirr, Beatrice; J. M. Patton, Omaha.

5. Pre and Post Operative Treatment, S. A. Campbell, Norfolk.

   Discussion—O. H. Hahn, Hastings; C. C. Hickman, Lincoln.

6. Nuclear Paralysis, F. F. Teal, Lincoln.

   Discussion—W. F. Curtis, Fairbury; E. C. Foote, Hastings.

7. Pelvic Lesions Producing Bladder Symptoms, Max Emmert, Omaha.

   Discussion—D. C. Hilton, Lincoln; Palmer Findley, Omaha.

### Tuesday, May 7, 1918—Two P. M.

1. Embolism and Thrombosis of Mesenteric Arteries, B. B. Davis, Omaha.

   Discussion—H. H. Everett, Lincoln; C. G. Johnson, Grand Island.

2. Pylorospasm, A. C. Stokes, Omaha.

   Discussion—Prof. Morgulis, Creighton Medical School; Prof. Guenther, University of Nebraska Medical School.

3. Differential Diagnosis Between Benign and Malignant Tumors of Female Breast, J. E. Summers, Omaha.

   Discussion—G. H. Brash, Beatrice; A. D. Nesbit, Tekamah.

4. Jejunostomy, A. I. McKinnon, Lincoln.

Discussion—J. E. Benton, Central City; Geo. Shidler, York.

5. The Role of the Appendix in the Etiology of Appendicitis, H. M. Hepperlen, Beatrice.

Discussion—W. E. Hillis, Syracuse; B. R. McGrath, Grand Island.

6. Mechanical Ileus due to Twisted Pedicle of an Ovarian Cyst, P. H. Salter, Norfolk.

Discussion—Morris Neilsen, Blair; S. R. Hopkins, Hastings.

7. Influence of the Anaesthetic on Surgical Mortality, S. R. Hopkins, Hastings.

Discussion—M. S. Moore, Gothenburg; A. P. Condon, Omaha.

### Wednesday, May 8, 1918—Nine A. M.

### CANCER SYMPOSIUM.

1. Early Recognition of Cancer of the Uterus, Palmer Findley, Omaha.

2. A Clinical and Pathological Study of Pre-Carcinoma of the Mammary Gland, Michael Wohl, Omaha.

3. Early X-ray Diagnosis of Carcinoma of the Stomach, Colon and Rectum, A. F. Tyler, Omaha.

4. Roentgen Ray Therapy in Cancer, (Cinematograph), R. L. Smith, Lincoln.

5. Results of Radium in Cancer, D. T. Quigley, Omaha.

Discussion—J. S. Welch, Lincoln; A. F. Jonas, Omaha; C. A. Allenberger, Columbus; A. V. Robinson, Beatrice; E. W. Rowe, Lincoln.

6. X-ray Diagnosis of Intra-Thoracic Lesions, C. H. Ballard, Omaha.

Discussion—F. W. Plehn, Scottsbluff; F. H. Kuegle, Omaha.

7. X-ray Demonstration of Bone Pathology, A. P. Overgaard, Omaha.

Discussion—C. R. Kennedy, Omaha; I. W. Haughey, Aurora.

8. Pyelography, Indications and Technic, Clarence Emerson, Lincoln.

Discussion—A. C. Stokes, Omaha; R. R. Hollister, Omaha.

### Wednesday, May 8, 1918—Two P. M.

### GENERAL SESSION.

1. Actual Benefits Surgery Has Derived from the War, R. R. Hollister, Omaha.

Discussion—A. F. Jonas, Omaha; E. A. Steenburg, Aurora.

2. Treatment of Fractures near Joints, C. H. Newell, Omaha.

Discussion—A. J. Brown, Omaha; C. O. Rich, Omaha.

3. Indications for and Results of the Use of the Metal Bone Plates, Bone Grafts and Conservative Methods in the Treatment of Fractures, A. F. Jonas, Omaha.

Discussion—R. R. Reed, McCook; R. R. Hollister, Omaha.

4. Bone Grafts in Treatment of Nasal Deformities, Col. J. M. Bannister, U. S. A., Omaha.

Discussion—J. J. Hompes, Lincoln; C. J. Haslam, Fremont.

"Treatment of Diabetes," Frederick A. McGrew, Comstock.

Synopsis: Treatment of Diabetes requires the pursuit of a well defined dietetic method. The dietetic pursuit must be voluntary, constant and prolonged. The control of the diabetic to that end, the sina qua non of successful treatment. Author's method off securing such control. Results obtained.

5. "The Natural History of Disease Conditions," Frank B. Young, Gering.

Synopsis: Definition of term. Explanation of term. Different types of infection with the same organism. Different prognosis in patients of different ages. A short study of these as applied to several different infections. The same in malignant diseases. The same in surgical conditions. The same in mental and nervous diseases. Summary and resume.

6. "Public Health Service for Rural Districts," F. W. Buckley, Beatrice.

"Pernicious Anaemia," LeRoy Crummer, Omaha.

7. "Medical vs. Surgical Treatment of Gastric and Duodenal Ulcer," J. H. Mayhew, Lincoln.

8. "Experimental Heart Infections," Geo. W. Covey, Lincoln.

9. "Nitrous-Oxid-Oxygen Analgesia in Obstetrics," Arthur L. Smith, Lincoln.

10. "Tests of Pathognomonic Value," Miles J. Breuer, Lincoln.

11. "Treatment of Nephritis," G. Sachs, Omaha.

12. "Symposium on Tuberculosis:"

(a) Clinical Study of Tuberculosis, A. K. Detwiler, Omaha.

(b) Roentgenological Study of Tuberculosis, F. H. Kuegel, Omaha.

(c) The Value of the Tubercular Fixation Test, H. J. Lehnhoff, Lincoln.

(d) Tuberculosis in Children, Floyd S. Clark, Omaha.

13. "Hemolytic Jaundice," W. O. Bridges, Omaha.

14. "Treatment of Syphilis," C. C. Tomlinson, Omaha.

15. "The Law as it is Practiced by Lawyers. How Much of It Do We Want?"

Synopsis: A brief portrayal of the tactics employed by attorneys in general when conducting a case in court, especially attorneys for the defense in criminal cases, professional criminal lawyers and their methods. The attitude of members of the legal profession toward members of the medical profession when the latter are interested in a case that is being tried in court. Legal technicalities to defeat justice. Medical legislation in our profession, etc. J. Lue Sutherland, Grand Island.

---

## MILITARY NOTES AND NEWS ITEMS.

Captain Joseph A. Henske is doing special work in the Mayo Clinics.

Dr. R. C. Person of Omaha is a lieuterant in training at Fort Riley, Kansas.

First Lieutenant R. C. Person is at M. O. T. C. Co. 17, Fort Riley, Kansas.

Dr. R. E. Roche of Syracuse has been ordered to the Base Hospital of Fort Houston, Texas.

Dr. A. L. Muirhead of Omaha has recently returned home from a short stay in the hospital.

Dr. and Mrs. R. E. Kriz announce the birth of a daughter, Elizabeth Jane, March 3, 1918.

Dr. O. P. Schnetzky of Schuyler expects to be called soon to serve in a hospital corps in France.

I. H. Dillon, M. D., the secretary of our Council, has not reported location, "somewhere in the service of Uncle Sam."

A cablegram has recently been received announcing the safe arrival of Major Henry L. Aikin of Omaha, in France.

Dr. W. E. Morgan of Petersburg who received his commission as first lieutenant has been called to Fort Omaha for duty.

Dr. E. L. Bridges of Omaha recently underwent an operation for ulcer of the duodenum. He is reported to be doing nicely.

Dr. J. S. Simms of North Platte received his appointment as first lieutenant in the medical corps and has been called to Fort Riley.

Dr. R. E. Giffen, for over thirty years a practicing physician in Lincoln, died February 8, 1918. Dr. Giffen was born in New York in 1859.

Dr. J. C. Waddell of Pawnee City has received his commission as captain in the University of Nebraska Red Cross Hospital No. 49.

Dr. Jos. D. McCarthy, resident physician at St. Joseph Hospital, was recently called into the service and was ordered to Ft. Oglethorpe, Georgia.

Dr. Norman Call Prince of Omaha has recently received his commission as captain in the Medical Reserve Corps department of roentgenology.

Dr. C. H. Arnold of Lincoln who is in an ambulance unit connected with the British army in France has been promoted from first lieutenant to captain.

Miss Amy Allison, retiring superintendent of nurses in the Methodist Hospital, Omaha, has accepted a like position in the Stewart Circle Hospital at Richmond, Va.

Doctors and nurses attending the Adams County Medical Society in Hastings subscribed about $250 for the Base Hospital No. 49, University of Nebraska Red Cross.

Dr. J. O. Hoffman, Dr. W. G. Rundle and Dr. A. J. Gardner of Orleans; Dr. Robt. H. Kerr of Alma; Dr. J. N. Campbell, Stamford and Dr. J. O. Vallcott, of Republican City.

Captain J. Clyde Moore has gone to Fort Shelby, Mississippi, for special service, pending his call to active duties in the University of Nebraska Red Cross Base Hospital Unit No. 49.

Captain M. S. Moore, M. D., Co. L, 134 Inf., Camp Cody, Deming, New Mexico, writes that he cannot be present at our State Association meeting next May. He is president of our Council.

Dr. Vincent L. Jones who has been serving as superintendent of the dispensary and instructor in pathology at Creighton Medical College, was recently called into service as first lieutenant.

About one hundred personal friends of Dr. Dishong who has recently been commissioned first lieutenant and goes as neurologist to the Red Cross Base Hospital Unit No. 49, gave him a farewell party at the Prettiest Mile Club in Omaha.

Captain Homer Davis, M. D., M. O. R. C., Temporary Adjutant, Headquarters Base Hospital, Fort Riley, Kansas, expects a leave of absence and will address our Association on health conditions at the Base Hospital in Fort Riley, Kansas, and Camp Funston.

Miss Bessie Welty of Gresham and Dr. John L. Linn of Omaha were married February 14, 1918. Mrs. Linn is a graduate of the Nebraska Methodist Hospital Training School for Nurses and Dr. Linn is a graduate of the University of Nebraska College of Medicine.

At a meeting of the board of county commissioners of Madison held February 19th the matter of establishing a board of health was taken up and a board was appointed as follows: County Commissioner W. S. Crook; Dr. Edward L. Brush, Norfolk; County Superintendent N. A. Housel.

Will the members of our Council who are at home, and will attend our State Association meeting, report their names to your state secretary? Our president, Chas. L. Mullins, desires that information pending his appointments of members who will attend to the business duties of the Council and House.

Dr. Charles Lieber has been called for active duty as assistant surgeon in Camp Decatur, at the Great Lakes Training Station, near Chicago. There are about 2,000 men in that camp. Dr. Lieber is a University of Nebraska graduate '08 and served as interne in the Swedish Mission Hospital in Omaha.

A. D. Nesbit, M. D., of Tekamah, recently called at the Journal office. Personal consideration for his health following a recent illness, made it desirable for him to spend the winter in California, but loyalty to our government impelled him to remain at home since he is on one of our Medical Advisory Boards.

Our latest report by the Council of National Defense, credits Nebraska with 330 physicians recommended for commissions. The number of these already "in the service" we do not know. That list is exclusive of Nebraska physicians in other departments of government service. We do not have data from which to certify their number.

Dr. Thomas D. Crothers, Hartford, Conn., aged 75, died Jan. 12th. He was a close student and an able exponent of the degenerative effects of alcohol and other habit forming drugs. He established and edited the American Journal of Inebrity, from its inception, 1876, to his death. He was a most lovable character, a hard worker and a loyal member of the medical profession.

Captain John Buis, M. D., 89th Div. 314 Sanitary Training Camp, Field Hospital 355, Camp Funston, Kansas, recently called at the Journal office. He reports better health conditions among the soldiers than prevails in equal populations in civil life. In civil life minor ailments are unnoticed; in the cantonments the most trivial ailment—ingrowing toenail—is reported "on the sick list.' '

The Gage County Medical Society meeting Jan. 30, 1918, program was: "Recent Research," Dr. F. W. Buckley, Beatrice; "Early Diagnosis," Dr. H. M. Hepperly, Beatrice; "Treatment and Prophylaxis," Dr. D. T. Quigley, Omaha; "X-ray Demonstration," Dr. A. V. Robinson, Beatrice. A dinner served at the Paddock Hotel for physicians and their wives present, was a splendid fraternal feature.

At a meeting of the Harlan County Medical Association held at Alma February 15, 1918, it was decided to raise the mileage fees from fifty cents to seventy-five cents a mile for day work and one dollar a mile from nine p. m. to six a. m. This action has been in effect in the surrounding counties for about a year and now places fees on a uniform basis. The following doctors signed the resolution:

Captain W. E. Wolcott of Omaha who recently went to England with the Goldthwait Orthopedic Contingent writes that he is now located at the Highland Military Orthopedic Hospital at Liverpool and has charge of one hundred and eighty beds. He expects to be in the British service from four to six months after which he will probably be transferred to France to take over the Orthopedic Hospital now under construction.

Dr. R. L. Smith and Dr. E. W. Rowe recently entertained the members of the Omaha Roentgen Society. The guests were served a banquet at the Lincoln Hotel. After the banquet a scientific program was given at the offices of these two men. Dr. Smith demonstrated the results of roentgen therapy and Dr. Rowe gave some interesting diagnostic points in diseases of the chest. The evening was a very enjoyable one and was well worth the trip.

## CASE REPORTS.

### Foreign Body in the Appendix.

F. A. Long, M. D., Madison.

The subject of foreign bodies in the appendix at one time was a matter of great interest to the profession, though now almost threadbare. An unusual case occurring in the practice of the writer will bear telling: A young man of twenty was attacked with pain in the appendiceal region during corn husking and after two days of pain was operated and the appendix when removed was found to contain a fresh apple seed so recently ingested that maceration of the seed had not yet taken place.

### Chancre of the Lip.

M. J. Breuer, M. D., Lincoln.

A young lady was sent in for diagnosis. The right side of her lower lip was considerably swollen and everted. The induration was characteristic, but there was very little ulceration. A little serum obtained by abrading the surface, was examined by dark field illumination, and active spirochetes were found, of a form characteristic of the Treponema pallidum. She admitted using a drinking cup in the office, which was also used by a man suspected by a number of the people around him, of having active syphilis. I was unable to obtain an examination of this man. She seemed quite frank in replying to my inquiries, and this was the only possible source of infection I was able to locate.

She has so far received two 0.6 gm doses of diarsenol. A specimen of blood taken at the time the first injection was given, gave a negative Wassermann test. Four days after the first injection, the lip lesion was almost healed. A week after the second injection, no traces were left on the lip. Another injection will be given, and the patient will be placed for some weeks on mixed treatment; then after the proper interval, the patient's condition will be checked by serum tests.

## Acute Lymphatic Leukemia.

Frank M. Conlin, M. D., Omaha.

E. L., age 21, Norwegian descent, machinist by occupation.

First consulted me September 9th. Came complaining of a sore throat and swelling of sub-maxillary glands, that had persisted for almost four weeks. Before that, said that he felt normal in every way. He had no epistaxis, or other hemorrhage.

Previous health except for headaches at times, has always been good. Pneumonia as a child and an attack of rheumatism recently that had disabled him for two weeks. Has had several attacks of tonsilitis. Denies venereal disease.

### Family History.

No similar condition of his grandparents, all of whom had been quite healthy. Father 60 years of age, is living and in good health. His mother died at 42, miscarriage and hemorrhage. He has three brothers living, seven sisters, all in good health; one died of pneumonia, one of rheumatic endocarditis and one of dysentery.

### Examination.

September 9th, showed a temperature of 101, pulse 96, respiration slightly elevated. Both tonsils markedly swollen, pillars of the fauces edematous, and tonsils covered with a gray-black exudate. The submaxillary glands of both triangles of the neck and of the occipital region were enlarged, but with seemingly no periadenitis. Examination of smears taken from the throat revealed a long bacillus similar to the fusiform bacillus found in Vincent's Angina, but without the pointed ends and without the spirilla that are always found associated. Cultures taken did not reveal bacillus diphtheria. Circumstances prevented my getting a blood examination and he disappeared. I did not hear from him again until the 13th, when I was called to see him. Found him with a temperature of 101, pulse 110, with still a marked involvement of the throat, and submaxillary edema more marked; chest shows dullness right lower region at the back; heart one-half inch outside the nipple line, no murmurs; spleen enlarged, reaching almost to the umbilicus; inguinal glands just palpable. Both lower limbs markedly edematous. WBC 50, 200, RBC, 2, 320,000. Differential count, large lymphocytes 50%, polymorphonuclears 48%, eosinophiles 2%.

### Examination.

September 15th, temperature 101, pulse 96, respiration still increased; gives the general appearance of an individual profoundly septic. Skin is clear, with the exception of dilation of the veins at the lower part of the chest, along the diaphragmatic attachment. No sign of hemorrhage, some edema over the chest wall, both sides; quite marked edema of the lower limbs. The glands of the neck still markedly enlarged. Right axillary glands palpable, and left iliac glands slightly enlarged. Heart and lungs practically the same. An egg-like mass at the left iliac region. Spleen markedly enlarged, liver seems pushed up, genitals negative.

White blood count at that time 50,400. Urine examination specific gravity 10.20; no albumin or sugar. Microscopic examination shows amorphous urates.

September 16th. Inguinal glands more markedly involved. Both axillary glands involved. Spleen extends to point one-half inch below umbilicus. Liver enlarged below costal margin, patient complains of pain over the left back and side of abdomen. Urine, negative. White blood count, 67,200, lymphocytes 815, polymorphonuclear leukocytes 18%, eosinophiles 1%, a few nucleated reds, and slightly polychromatophilia, temperature normal, pulse 128.

September 18th. White blood count 83,800, spleen slightly larger, all glands more marked. Patient complains of difficulty in breathing, except when sitting up. Benzol treatment started.

September 21st. White blood count 128,800.

September 22nd. White blood count 114,800.

September 23rd. White blood count 107,00. Complains of some pain in the left back and over spleen. Respiration somewhat embarrassed. Examination of right chest gives evidence of fluid. Chest tapped, and 18 ounces bloody fluid removed, after which the respiration markedly improved, he spent a fairly comfortable night.

September 24th. Breathing again labored, and marked evidence of fluid in right chest. Chest again tapped, and a quart of fluid removed. Patient slightly delirious at times. White blood count 160,000. Some edema of the feet, left side of the face and hands.

During the last three days the glands all over the body, with the exception of those in the neck, have been gradually becoming larger. The differential count showed a gradual increase in the proportion of lymphocytes till the end, when they comprised over 90%.

The patient died September 26th, fourteen days after he first came under observation. The duration of the condition from the very first symptoms to his death was just a little over one month.

Gilbert & Weil (Arch. de med. 1899) classify acute leukemia in three types.

First—Typical acute leukemia with enlargement of the lymphatic apparatus as a characteristic feature.

Second—The hemorrhagic type characterized by a hemorrhagic diathesis.

Third—Buccopharyngeal type with hemorrhagic infiltrations and ulceration and necrosis of the oropharyngeal cavity.

This case illustrates the first of Gilbert & Weil's classification, that is the type with enlargement of the lymphatic apparatus as a characteristic feature. It may be considered a typical case and in it, the clinical picture of an acute infection is well shown. The beginning of an acute leukemia may be insidious or rapid, the latter occurring most frequently. It usually runs a rapid course and terminates fatally within a period of a few days to several weeks. Guttman (Ber. klin. Woch. 1891) reports one case lasting in all only four and one-half days. Preceeding the onset for days or weeks there may be symptoms such as lassitude, weakness, pains in neck or head, pallor, shortness of breath, dizziness and fever. Other cases begin with drawing pains in the extremities and swelling of the joints, very similar to acute articular rheumatism. Quite often ulcerative changes with hemorrhages of the mucous membranes of the mouth and throat, particularly of the tonsils and gums, are among the first symptoms. Enlargement of the spleen, the lymph nodes, lymphatic structures and oropharyngeal cavity and of the thymus, may occur early. In some cases, however, these enlargements comprise only a small part of the clinical picture, but never reach the size that is present in chronic lymphatic leukemia. Hemorrhages into the skin, subcutaneous tissue, mucous membranes of the mouth, urogenital organs and into the gastro-intestinal tract may occur. The diagnosis may often be obscure, resting entirely upon the blood examination, but even the blood picture may, especially in the early days, show only slight changes, and the leukocytes may be only slightly increased. Benjamin Sluka reports a case with a count of only 2,500 white blood cells. From this point the count may extend over 100,000 and the diagnosis rest not upon the number, but upon the blood pictures. The increase in the number of lymphocytes being often over 90%, mostly of the larger types.

---

## Cultures of Tubercle Bacilli from the Blood and Other Body Fluids in Clinical Diagnosis.

Mildred C. Clough of Baltimore, has collected from the literature 1,508 cases of tuberculosis in which human blood was inoculated into guinea pigs and the demonstration of tubercle bacilli claimed to have been shown. She reports her study in the American Review of Tuberculosis, December number. The percentage of positive results, 12.9 per cent, corresponds approximately to that found by Fischer in 1,250 collected cases, with 17 per cent positive inoculations. Fraenkel of 500 cases with 20 per cent positive results, and by Austrian and Hamman of 863 cases with 11 per cent positive inoculation. Excluding from her compilation those cases open to criticism there remain 1,345 cases of 1,508 with 8.8 per cent of positive inoculations. Faber selecting 1,060 cases tested during life found only 4.2 per cent positive while 37 cases tested post mortem showed 38 per cent of positive inoculations.

If only the cases of miliary tuberculosis among the 1,508 are considered, the percentage rises to 66.6 while positive inoculations in the remaining cases of all other types of this disease sink to 6.7 per cent. Only one case was found in the literature, that of Faber, in which tubercle bacilli were grown from the blood of a tuberculous patient.

The author employed two methods of culture. First: citrated blood was inoculated into flasks of glycerine broth (made neutral or slightly acid to phenolphthalein) incubated several weeks, centrifugalized, and the sediment planted on human blood agar slants, sealed with paraffine and incubated. Second: citrated blood was hemolyzed with distilled water, centrifugalized at high speed for one and a half hours, the sediment planted on human blood agar slants, sealed and incubated.

By the first method positive cultures were obtained in three cases of miliary tuberculosis. In two of these guinea pigs were inoculated with citrated blood. In one case the pig died prematurely, in the other both pigs remained well. By the second method three positive cultures were obtained in two cases of miliary tuberculosis, one blood specimen being obtained post mortem. Guinea pigs were inoculated with the sediment of the hemolyzed blood. In the one case the pig developed tuberculosis. In the second case a pig inoculated with the ante-mortem blood sediment died after three months without tuberculosis lesions. By one or the other method negative blood cultures were obtained in two cases of miliary tuberculosis. In one of these only 2 cc. of blood was available for culture and 1 cc. for guinea pig inoculation. The pig remained healthy for three months, and without glandular enlargement. In the second case the guinea pig inoculation was also negative as well as the blood cultures. In nine cases of tuberculosis of other types blood cultures were negative, and guinea pig inoculation done in four cases was also negative.

Tuberculosis fluids were centrifugalized and the sediment cultured. Of sixteen spinal fluids, two were negative and fourteen positive. In seven of the latter, bacilli could not be demonstrated in the smears. In five of the cases positive by culture guinea pigs had been inoculated of which four were positive and one died prematurely. Four pleural fluids were cultured and inoculated into guinea pigs with one case positive, positive by both cultures and inoculation, though smears were negative. In two out of three fluids from tuberculosis joints, in pus from two cases of tuberculosis abscess of rib and sternum respectively, positive cultures were obtained. One joint fluid was inoculated into a guinea pig which died prematurely without lesions. One peritoneal and one pericardial fluid, both probably not tuberculous, were negative by culture and by guinea pig inoculation. No case in the series positive by guinea pig inoculation was not also positive by culture. In the beginning no attempt was made to demonstrate the growth of tubercle bacilli at the earliest possible date. Later they were observed in as short a time as seven days. The initial growth may not be what is commonly looked upon as characteristic. All cultures were verified by inoculation into guinea pigs. The author feels that the data are insufficient to permit of definite conclusions, but that the evidence would indicate that the cultural method will probably prove more constant and more rapid than that of guinea pig inoculation. As compared with examination of smears, these are unreliable in the case of blood where a culture gives positive evidence and often negative in the case of clear fluids where cultures may be obtained. The practicability of blood cultures as a diagnostic method will depend upon the frequency with which the tubercle bacillus enters and persists in the blood stream, a point still to be worked out by more reliable methods of study than those employed in the past. The data with regard to experimentally infected animals cannot be assumed to represent the conditions in human cases which are not exactly analogous and similar work on human beings should be done. In conclusion the author suggests these blood cultures be as an aid in the differential diagnosis of acute miliary tuberculous from nontuberculous infections, and that direct cultures be made from clear fluids in which tubercle bacilli cannot be demonstrated by smears.—Clough, Mildred C.: The Cultivation of Tubercle Bacilli from the Circulating Blood in Miliary Tuberculosis, Am. Rev. Tub., 1917, Vol. 1, No. 10.

---

### Standards for Diagnosis, Classification and Treatment of Tuberculosis in Children and Adults.

The Diagnostic Standards Committee of the National Association for the Study and Prevention of Tuberculosis, working in cooperation with the representatives of the Community Health and Tuberculosis Demonstration in Framingham, has prepared a set of standards for diagnosis, and has also attempted to clarify somewhat the standards for treatment in the several stages of the disease. According to the American Review of Tuberculosis, it has also recommended for use in Framingham the National Tuberculosis Association classification with modifications suggested by Dr. W. L. Rathbun, of Otisville, New York.

With relation to the diagnosis of thoracic (pulmonary, bronchial bland, etc.) tuberculosis in childhood the definitions are first given of the following fourteen terms, loss of weight, loss of strength, fever, elevation of pulse, hemorrhage, family history, exposure, cough, sputum, hoarseness, rales, dullness, altered voice and breath sounds, D'Espine's sign. With these definitions as a basis the minimum standards for diagnosis are enumerated. For the diagnosis of pulmonary tuberculosis in adults with negative sputum the first ten terms above are redefined, and upon these as a basis the minimum standards for diagnosis listed.

The classification of pulmonary tuberculosis of the National Association divides cases into four classes; incipient, moderately advanced, far advanced, and acute miliary tuberculosis. Unfortunately, however, lesions and symptoms are not interchangeable but immobilized in each of the three stages, whereas in practice a far advanced case, for example, may present only incipient symptoms, or vice versa. Therefore Dr. Rathbun has suggested the listing of lesions and symptoms under separate headings, designating the lesions as incipient, moderately advanced or far advanced and the symptoms as A slight or none, B moderate and C severe. This makes possible a greater fluxibility, and a more accurately descriptive classification of a given case.

From the point of view of treatment adult cases are divided into suspicious, those in which the diagnosis is positive, and the arrested and apparently arrested cases. Recommendations for the treatment of three cases are given.—Standards for the Diagnosis, Classification and Treatment of Tuberculosis in Children and Adults; Community Health and Tuberculosis Demonstration of the National Association for the Study and Prevention of Tuberculosis, Framingham, Massachusetts, Am. Rev. Tub., 1917, i. 10.

---

## Book Reviews.

**An Intermediate Textbook of Physiological Chemistry With Experiments, by C. J. V. Pettibone, Ph. D., Assistant Professor of Physiological Chemistry, Medical School, University of Minnesota, Minneapolis. St. Louis, C. V. Mosby Company, 1917. Price $2.50.**

The author states his purpose in the preface as follows: "My aim in writing this book has been to prepare an intermediate text which would cover the general field of physiological chemistry in such a way as to give students a familiarity with compounds important from a biochemical viewpoint, and to acquaint them with the fundamental processes which go on in the animal body. I have attempted to avoid confusing the beginner with lengthy discussions of debated points, but to set forth as clearly as possible the present status of our knowledge. The material is so chosen that the book may be used for intermediate classes, or for advanced work if supplemented by lectures."

Many teachers of beginning classes who have seen the discouraging struggle of their students with the customary but bulky standard textbooks, have felt the need of a textbook constructed on these lines. For an elementary class of students this book presents in Part 1 a very well selected body of descriptive matter. Like the larger text-book of Mathews, which this one strongly resembles on a smaller scale, there is presented in a separate portion of the book, Part II, a descriptive guide for laboratory work on essentially the same topics as are treated in Part I.

Two criticisms of this book may be made, one on account of the extreme brevity with which topics are treated, and the other on account of the omission of modern, recent methods from its laboratory description. The student who is sufficiently mature to study physiological chemistry at all as an independent subject, and especially the present day medical student, would fail to get an adequate perspective of biochemistry from this brief treatment of important topics. Likewise the medical student could not afford to omit the newer time and labor saving methods, which are the only ones he will ever use clinically, and which excel not only in speed and efficiency but also in simplicity of manipulation.

In view of the great value of his time, urgently demanded by each of a multiplicity of subjects and of the practicality of his aim, it is difficult to see why he should ever learn the older time consuming procedures.

The present book will be found very useful by those who wish an introduction to the subject and whose aims in studying it are not too closely bound to the customary technical or professional interests of biochemical students.

A. W. P.

## ABSTRACTS.

### Practical Medicine Series—De Lee.

### Treatment of Eclampsia.

"Eclampsia is still the field of contentious theories of causation and ideas of practice. As far as etiology is concerned we are not one whit wiser than we were ten years ago—or 100 years ago, when humoral pathology was in its prime. That the disease is the evidence of a toxemia was known then, though the nature and origin of the poisons was not known, even as such ignorance prevails at present. Bleeding was practiced then, and is coming into renewed favor now. When the editor was a student of medicine, the medical treatment of eclampsia was in vogue—a method practically identical with Stroganoff's method of today. Duehrssen soon after published his views and urged the immediate emptying of the uterus upon the breaking out of the first convulsion. Since then a battle had been raging regarding the treatment of this disease, and for a time the activists bid fair to win out.

"Of recent years the medicinalists have been gaining recruits to their banner. The latter have used statistics as their strong argument and have shown percentages very favorable to the waiting policy as compared with the very active treatment."

"It is generally agreed that eclampsia is an intoxication but the source of the toxin is still unknown. It has been attributed by some to the placenta and by others to toxins from the fetal serum. Neither theory explains all the cases of eclampsia, for it has occurred in cases of hydatidiform mole without pregnancy and after the delivery of the fetus and placenta, and there are also cases that recover during pregnancy when toxins from the fetus or placenta would be active. If either of these theories is held to be the cause, the rational treatment of eclampsia is to empty the uterus at once. This was formerly done at the Vienna Clinic by vaginal Cesarean section, but this radical treatment has been abandoned, and now the chief reliance is placed on bleeding and narcotics. The patient is immediately placed in a dark, quiet room; the obstetric examination is made under slight anesthesia and the urine is catheterized for examination. From 400 to 600 c.c. of blood are withdrawn and an injection of 0.02 gm. of morphine is given at once, and three hours later an enema containing three grams of chloral hydrate. If the fetus is in good position for delivery it is delivered by forceps or extraction to save the patient the added danger of labor pains. If the convulsions do not stop, the bleeding is repeated and more morphine and chloral are given. If eclampsia begins during pregnancy labor is induced by a bougie or bag."

"Knipe and Donnelly point out that the non-operative treatment of eclampsia gives a lower percentage of deaths than the operative. In eighty-three cases of severe toxemia (pre-eclampsia and eclampsia) treated by them since 1910, forty-eight patients had convulsions before delivery. Twenty-four had convulsions after delivery only; of this latter group four died.

"The total mortality in the eighty-three cases was 16.8 per cent. If the patients lying within twenty-four hours after admission to the hospital be excluded the mortality was 6 per cent.

"Their method of treatment was as follows:

"Lavage of the stomach; 2 ounces of castor oil given through the stomach-tube; twenty to thirty minutes' sweat in the sweat cabinet; hypodermic of morphine, gr. ½ is given, if the convulsions are violent or frequent; hypodermoclysis after the first sweat, followed by proctoclysis midway between the subsequent sweats; venesection if systolic blood-pressure is over 180, and more particularly if the diastolic pressure is high; an initial dose of veratrum viride (10 minutes) followed by nitroglycerine gr. 1/100 at four-hour intervals. Puncture of membranes if pregnant or in labor and abstention from any operative interference to hasten delivery, which they find is spontaneously terminated in from eight to ten hours from the institution of treatment."

"A plea for the use of veratone in eclampsia, in which the dosage is controlled by the blood-pressure, is made by W. F. T. Haultain. He reports thirty-eight consecutive cases in which the drug was used with only two deaths, and one was from pneumonia, the other from puerperal peritonitis. The fetal death rate was lower than 50 per cent.

"The author states that the four symptoms —headache, blood-pressure, very scanty urine and albuminuria—when taken together indicate the proximity of eclampsia. He also says that in this series of thirty-eight cases the blood-pressure is perhaps the principal factor, and it ranged from 165 mm. minimum to over 200 mm. in cases having eclamptic convulsions.

"Veratone acts partly by lowering the blood-pressure, even at the rate of 40 mm. to 60 mm. in less than thirty minutes, and if this can be done convulsions will not occur; the urine will increase in amount and the albumin decrease. The drug must have some specific action in cases of eclampsia, for in normal individuals it causes only a moderate fall in blood-pressure, while in eclampsia the fall is marked; also doses that may be given with impunity in eclampsia will be poisonous in cases of uremia or chronic nephritis with high blood-pressure.

"Those who advocate medical treatment include Stroganoff of St. Petersburg and H. Tweedy of Dublin.

"According to Tweedy, this method rests upon four principles: "(1) Accouchment force is not advocated in any form; immediate delivery only when easily possible. (2) Limit metabolism and avoid further metabolism. This is done by starvation, gastric lavage, and the giving of morphine. (3) Aid excretion by purging and irrigation of the bowels. Sweating is never done, as it concentrates the toxines in the blood, thereby increasing the danger of convulsions. Venesection in specially selected cases, followed by infusion of salt, or, better, by the carbonate of soda into the vein or the bicarbonate of soda under the skin. (4) The treatment of special signs, such as convulsions, respiratory weakness, and cardiac weakness." Morphine, according to Tweedy, meets these indications best of all. Immediately after the first convulsion, if possible, give ½ grain morphine hypodermically and an additional ¼ grain every two hours until 2, or even 3, grains are given in the first twenty-four hours. "When the respiration reaches six or seven a minute, it is an indication that the limit is reached. After the first dose wash out the stomach thoroughly and pass a reliable purgative through the tube—any effective purgative. This done, catheterize the patient, measure and then analyze the urine. Patient must be kept well on her side or almost on the face to prevent aspiration pneumonia. Pass a high colon tube and irrigate the bowels with several pints of a solution of bicarbonate of soda, and at the close of the irrigation leave a pint in the bowels for absorption. If the urine remains scanty, then use a solution of the bicarbonate of soda under each breast. Labor is never induced at this juncture, but should take place as it may. Do not interfere until the cervix is dilated; then apply forceps and shorten the second stage.

"Stroganoff follows a similar line of treatment, except that he gives large doses of chloral hydrate by rectum in conjunction with the morphine. The results of this line of treatment are as follows:

"Tweedy treated seventy-four patients, with a maternal mortality of 8.11 per cent, and a fetal of 30 per cent. Stroganoff treated personally 360 cases, with a maternal mortality of 6.6 per cent and fetal of 21 per cent.

"Now a word about the mortality rate in the United States. The rate as gathered from nine of the largest lying-in hospitals in this country gives an average of 38.4 per cent maternal. The Royal Maternity of Edinburgh gives a maternal mortality of 66.6 per cent; Guys Hospital, in London, is 25 per cent; Williams at Johns Hopkins, 20 to 25 per cent; DeLee over 20 per cent; the New York Lying-in Hospital, 30.8 per cent; Edgar, 20 per cent; Cragin, of the Sloan Maternity, 28 per cent. In most of these hospitals various methods are used."

A. B. S.

# THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, OMAHA, MAY 7, 8, 9, 1918

Vol. III. Norfolk, Nebraska, April, 1918. No. 4

## CONTENTS

Page

Medical Inspection in the Public Schools of Omaha, E. T. Manning, M. D., Omaha.... 105

Nephritis, Adolph Sachs, M. D., Omaha.... 109

The Diagnosis and Management of Cardio-Vascular Renal Disease, John W. Shuman, M. D., Sioux City, Iowa.... 114

Treatment of Certain Fractures Occurring in or Near Joints, C. H. Newell, M. D., Omaha.... 116

Physical Examinations of Applicants for the Aviation Service, U. S. A., Frank M. Conlin, M. D., Omaha.... 120

Editorial.... 122

Nebraska Medical Men and the Medical Reserve Corps.... 123

Prophylaxis, with Special Reference to Protein Metabolism, J. Lue Sutherland, M. D., Grand Island.... 124

Military Anti-Tuberculosis Program Perfected.... 129

Smallpox, R. W. Fouts, M. D., Dawson.... 130

Nebraska State Medical Association.... 135

The Chicago Session.... 135

Case Reports, Report of Case of Persistent Hiccough, L. M. Stearns, M. D., Kearney 136

Book Reviews.... 136

## Medical Inspection in the Public Schools of Omaha.

E. T. Manning, M. D., Omaha.

About three years ago, during an epidemic of a contagious disease in Omaha, several nurses were engaged to assist physicians in inspecting those schools where the cases were most numerous. The good results of this work were so very apparent that the school board decided to retain the services of one of these nurses, to oversee and assist the principals and teachers in promoting better conditions of health among the school children, especially as related to contagion. Due largely to the efficient way in which this nurse performed her task, the following year the board decided to employ permanently six nurses to make routine examinations of the entire school population. Organization of a system and perfection of details were left to Miss Charlotte Townsend, the first nurse employed.

About the middle of this school year it became apparent that to make this work more effective, an attempt should be made to detect physical defects also in the children, as well as inspect them for signs of contagion. Accordingly, under the supervision of Miss Townsend, a beginning was made in this direction and a card index of those children showing the most glaring physical defects, was prepared by the nurses in their routine examinations. The results were so striking that the work was continued during the summer vacation after the following plan. The entire city was divided into six districts and a school in each district designated as a place where the children were brought by the nurses for one hour a week for a more careful examination by a physician. Absolutely no medical treatment was given, but if any defect was discovered the child was referred to the family physician if any such existed. If not, the parents were given a list of specialists in the disease from which the child seemed to be suffering and told to make their choice. They were strongly urged to consult one before school opened in the fall.

The children falling in the above classification, however, were very few in number. By far the majority of the cases examined were from very poor families and were absolutely unable to pay for medical attention. These were accordingly referred to one of the free medical or dental dispensaries for treatment.

It soon became evident that we were in grave danger of doing the medical profession an injustice, as many parents who could easily afford a small fee, showed a disposition to take advantage of the opportunity for free treatment. Accordingly, a system of home inspection was developed, wherein the home of each child was visited by a nurse, the home condition ascertained by actual observation, and the parent or guardian asked to sign a card giving his financial condition. These children, if found worthy of receiving free treatment, were then taken to one of the dispensaries and given medical attention.

It is almost impossible to describe the physical condition of some of these children. Fortunately it will not be necessary to do so to physicians. Suffice it to say that the need for further work was so apparent that the Board of Education decided to enlarge, or rather create, a Department of Health Supervision in the schools.

After considering the results of Health Inspection obtained by different methods in several American cities, the following plan was adopted. Eighteen nurses were employed to do all the inspecting under the supervision of Miss Townsend, and in addition a physician was employed with whom the nurses could consult, and to whom they could take cases at a certain hour each day when they were uncertain as to the proper disposition.

This plan may be criticised on the ground that the medical inspection properly should be done by physicians, and that nurses should be used to see that the suggestions of the physicians are carried out. We were influenced in its adoption by certain facts. First, the need of economy, and second the probability of increased efficiency. We very soon became convinced that any success obtained, would be largely dependent on the ability of the nurses to select the most practical method of approach in each individual case. Consequently Miss Townsend selected the nurses, not only with regard to their professional ability, but also on account of their possession of what can best be described as the human element. It was reasoned that any disadvantage incurred by not having a physician's judgment, made more or less hastily, would be far outweighed by the closer personal relations that the nurses would be able to establish with both the child and its parents.

An effort was made to train the nurses for this special work as follows: One week before the opening of school last fall, the nurses were assembled and a series of lectures given them by different specialists. Instruction was given in the recognition of early signs and symptoms of the contagious diseases, the epidemiology being especially discussed. Also the various signs of physical defects were explained, and any variation in the normal development of the child was given as a cause for careful investigation and study. Instruction was given in the use of the Vision Test Card, and other signs of possible eye strain were explained. Lectures were given on the proper development of the child's teeth, and the possible effects of diseased teeth on the general health were pointed out. At various times through the year these lectures have been repeated, taking up those subjects which experience showed to be necessary. The point has been made clear to the nurses that they are in no case to make any effort to diagnose a disease, that they are simply to be able to recognize a deviation from the normal, and are then to see that the case gets proper attention.

Conforming to the laws of the state of Nebraska, any system of medical inspection must be divided with two objects in view, first the control of contagion, and second, the effort to detect and correct physical defects.

There is ample regulation for the control of contagious disease, and any measures taken toward this end can easily be enforced. But the effort to correct physical defects immediately meets with the difficulty that it must be done with the full consent and approval of the parent or guardian, which in a great number of cases is exceedingly difficult to obtain. For example, even though we are absolutely certain that adenoids and diseased tonsils are a menace to a child's health, it may be absolutely impossible to institute any form of treatment because of the ignorance, or what is infinitely harder to manage, the apathy of the parents. Again, it is not unusual to find that the child's parents are sufferer's from that most inane malady, Christian Science, and then the attempt to correct a physical defect is almost hopeless.

Nothing especially troublesome has occurred in the effort to control contagion. We have cooperated closely with the city Health Department and Dr. Connell assures us that the inspection work has been of great assistance in limiting the spread of contagion. We find that in those diseases where the premonitory symptoms are sufficiently definite, the child may be excluded from school in the majority of cases before the contagious stage, and thus the number of cases limited. As is to be expected, in those diseases where there is no demonstrable specific signs or symptoms in the incubation or invasion stages, the problem of early isolation becomes very much greater. However, we feel that even here we have made at least some progress.

I can best explain our difficulty in this respect by an illustration. It is a current observation with all of us that it is absolutely impossible to say in any given case of acute coryza, that we are not dealing with the early stage of epidemic meningitis, scarlet fever, small pox, chicken pox, German measles, or notably measles. I am strongly of the opinion that theoretically at least, the correct mode of procedure would be to exclude all cases of acute coryza, but if this is done there will be times when the attendance will be so limited, that we immediately incur the criticism of the school authorities, with more or less justice.

Probably the most universally accepted cause of diseased tonsils is repeated colds. There is likewise little doubt that these colds are infectious, and, considering the close association of school children, also contagious. We have adopted a middle course. When a cold is in the state of free secretion which usually lasts about three days, the child is excluded. In this way most of the cases of the exanthemata are excluded early. It seems practically impossible to limit the spread of chicken pox or German measles, because of the fact that most of these cases break out in school with absolutely no premonitory symptoms.

Children are also excluded for three days when there is vomiting or headache. In a great majority of cases this is, of course, simply an evidence of indigestion, but due again to the frequency with which these conditions initiate infectious diseases, we fell that we have been justified in the above regulation.

Conditions such as impetigo contagiosa, scabies and any of the tineas, cause us considerable difficulty, chiefly because the City Board of Health does not include them in the list of reportable diseases. We have observed repeatedly that many physicians fail to recognize the contagiousness of these conditions, and we are forced to use our own authority to produce any attention. Again, it is quite a common observation that a physician will advise tincture of iodine, which if used too strenuously will simply aggrevate the condition. As we religiously attempt to observe the regulations of that mysterious document, the Medical Code of Ethics, occasionally children are kept out of school for weeks, on account of some simple ailment which is easily correctable.

Our department has been criticized for excluding the above mentioned diseases, and such conditions as open tuberculous or syphilitic ulcers, and the children then being allowed to roam freely about the streets. This, of course is to be deplored but I have but to state in explanation that we are employed by the Board of Education, and consequently have absolutely no authority over the child after he reaches home.

One of the most difficult features of medical inspection is the keeping of adequate records. Our system is a composite selection of those in use in several different cities. A card is kept by the teacher showing the health record of the child from the kindergarten through the eighth grade. The items on this card are made out by teacher and nurse, each one having a separate code and only the code number or letter appears. The teacher notes any possible abnormality that is evident to her at any time. When the nurse arrives at the school a notice is given to all the teachers and the child with any suspected trouble is given his card and sent to the nurse. After a thorough examination her procedure is as follows: If there are symptoms of contagion she sends the child home with a note to the parents. She does not attempt a diagnosis but immediately reports suspected contagion to the City Board of Health both by telephone and postcard. If in her examination she finds signs of some physical defect she does not exclude but sends a note to the parents suggesting that the child be taken to the family doctor. The nurse has her own card record and if in a reasonable time there is no action taken she visits the home. In addition to the above procedure occasionally a routine inspection of all children is performed. This is done especially in time of epidemics. Each of our medical dispensaries gives us two special hours a week and at these times the nurses personally attend, taking with them those children who would not go otherwise.

A few statistics may be of interest. The following figures apply to the work done in the first half of the present year:

| | |
|---|---|
| Number of schools under supervision | 56 |
| Number of nurses on duty | 18 |
| Total school population | 35,000 |

School Room Work —

| | | |
|---|---|---|
| Number of visits to schools | | 1,886 |
| Number of routine inspections for contagion | | 193,995 |
| Number of suspected contagious cases | | 2,631 |
| Small Pox | 39 | |
| Scarlet Fever | 25 | |
| Diphtheria | 26 | |
| Measles | 254 | |
| Pertussis | 39 | |
| Chicken Pox | 146 | |
| Parotitis | 5 | |
| Sore Throat with Fever | 671 | |
| Scabies | 44 | |
| Impetigo | 365 | |
| Favus | 56 | |
| Conjunctivitis | 121 | |
| Indigestion | 197 | |
| Coryza | 433 | |
| Headache and Vomiting | 210 | |
| Number of Physical Examinations Made | | 8,386 |

| | Defective | Corrected |
|---|---|---|
| Teeth | 2,917 | 1,309 |
| Tonsils | 1,618 | 266 |
| Adenoids | 684 | 162 |
| Enlarged Glands | 305 | 10 |
| Defective Hearing | 255 | 14 |
| Defective Vision | 839 | 238 |
| Chorea | 16 | 4 |
| Orthopedic Defects | 34 | 4 |

Referred to—

| | |
|---|---|
| Visiting Nurse Association | 14 |
| Associated Charities | 18 |
| Dental College | 86 |
| Dental Dispensary | 1,124 |
| Medical Dispensary | 1,056 |
| Family Physician | 653 |
| Family Dentist | 677 |

Number of—

| | |
|---|---|
| Class Talks | 256 |
| Individual Health Talks | 3,521 |
| Dressings and Minor Wounds | 1,984 |
| Toilet Room Inspections | 300 |
| Emergencies | 104 |
| Throat Cultures | 26 |

| | |
|---|---|
| Home Visits and Investigations | 2,808 |
| Free Dental Dispensary for Children | 1,034 |

Free Medical Dispensaries:

Eye, Ear, Nose and Throat Department—

| | |
|---|---|
| Refractive Error | 102 |
| Number fitted with glasses | 35 |
| Strabismus | 12 |
| Astigmatism | 10 |
| Tracoma | 3 |
| Conjunctivitis | 10 |
| Sub-conjunctival Hemorrhage | 3 |
| Chalazions | 7 |
| Blepharitis Marginalis | 9 |
| Congenital Cataract | 1 |
| Keratitis | 1 |
| Defective Hearing | 12 |
| Chronic Otitis Media | 11 |
| Hypertrophied Tonsils | 250 |
| Adenoids | 94 |
| Nasal Obstructions (other than Adenoids) | 8 |

Skin—

| | |
|---|---|
| Impetigo Contagiosa | 23 |
| Eczema | 5 |
| Scabies | 5 |
| Favus | 3 |
| Urticaria | 3 |
| Herpes | 2 |

Pediatrics—

| | |
|---|---|
| Anaemia and Malnutrition | 8 |
| Enlarged Glands | 8 |
| Orthopedic Defects | 5 |
| Thyroid | 7 |
| Catarrhal Jaundice | 1 |
| Seborrhoea | 1 |
| Tuberculosis of the Spine | 1 |
| Uncinariasis | 1 |
| Acute Bronchitis | 1 |
| Osteomyelitis | 1 |
| Nephritis | 1 |
| Epilepsy | 2 |
| Sycosis | 1 |
| Cretinism | 1 |
| Neuralgia | 1 |
| Inguinal Hernia | 4 |
| Heart Diseases | 2 |
| Chilblains | 2 |
| Frozen Ear | 1 |
| Ingrowing Nail | 1 |
| Pyogenic Infections | 7 |
| Fractures | 10 |

Surgical—

| | |
|---|---|
| Tonsillectomies | 236 |
| Adenectomies | 198 |
| Herniotomies | 2 |
| Appendectomies | 2 |

Undoubtedly the most striking results of school inspection are obtained in the control of contagion because the effects are most easily measured. But when the results of the efforts to correct physical defects are carefully analyzed, the impression is gained that the control of contagion is only of secondary importance, and that the greater work of providing a sound body in which to develop a sound mind, is the real object to be sought. This is in accord with modern progress in medicine, and it seems especially fitting that this effort to develop preventive medicine should be initiated in the public schools, for it is primarily a campaign of education. It is a truism, that many of the ills of adult life, could be prevented by a closer observance of the now well established principles of sanitation, dietetics and hygiene in the care of the growing child. Conforming to this idea we have encouraged our nurses to follow the physically defective child into his home and there endeavor by persuasive and educative methods, to instill the principles of prevention rather than cure. Further than this, we are instructing the teachers along these lines, and it is gratifying to note that they accept our regulations and suggestions with enthusiasm. Some of the best results we have been able to show have been produced largely on account of the cooperation of the teachers.

It is much too early to be able to show any tangible results on the school records of the treated children. However, these records are being carefully kept, and we confidently expect to be able to show a decided improvement in the near future.

In conclusion, we wish to thank the physicians who have conscientiously helped us in controlling the health of the school child. I take great pleasure in stating that there has not been a single case of a child needing medical attention, where we have met with the least difficulty in securing it for him.

## *Nephritis.

Adolph Sachs, M. D., Omaha.

In 1827 Bright first described the condition now known as Bright's disease, and since that time, many investigators have been at work trying to add to our knowledge of this important subject.

Pathologists and clinicians have differed radically for years regarding the classification of nephritis, each side claiming its own classification to be superior to that of the other. Each pathologist and each clinician has his own individual idea, therefore, no universal classification is available at this time. In the September number of the "Medical Clinics of North America" Stengel tabulates nephritis as follows:

1. Tubular Nephritis:
    - (a) Mild, with practically no symptoms except albuminuria and cylinduria;
    - (b) Severe, with characteristic urinary findings and edema;
2. Glomerulonephritis:
    - (a) Acute form, with dropsy, mild or severe hematuria, as well as a tendency to uremia;
    - (b) Subacute, or intermediary form, with scarcely any renal symptoms, with pronounced elevation of blood pressure;
    - (c) Chronic form, with excessive blood pressure, marked fixation of specific gravity or urine, tendency to uremia, disturbances of vision and suggestive appearance of patient.
3. Renal Sclerosis:
    - (a) Possible primary renal sclerosis, following acute interstitial nephritis;
    - (b) Secondary renal sclerosis following glomerulonephritis and mixed nephritis;
    - (c) Terminal sclerotic kidney, following arteriolar sclerosis;
    - (d) Arteriosclerotic atrophy of the kidney.

In this classification he has not mentioned amyloid kidney, syphilitic nephritis, nor other types of less importance.

The above classification is a good one, but I am sure it would not be looked upon with favor by many pathologists.

Vollairdt and Fahr, in a recent work on nephritis, give still another classification which is at present attracting considerable attention. However, I believe it best to adhere to our older one of parenchymatous and interstitial nephritis, with which we are all familiar, until the above is more universally

---

*Read before Richardson County Medical Society, 1917.

accepted. This classification seems sufficient from a pathological point of view, but our knowledge of kidney function has advanced so rapidly that it is necessary to make not only a pathological diagnosis, but also a functional or clinical diagnosis as well.

In times past, the pathologists frequently ridiculed the clinicians on their diagnoses because no gross change was found in the kidney on post mortem examination, but it is now a well known fact that a functional change in the kidney may be detected long before a gross pathological lesion can be recognized. From a clinical or functional standpoint, nephritis is divided into three groups, an azotemic nephritis, a chloremic nephritis and a vascular nephritis.

An azotemic nephritis is one which excretes the nitrogenous products with difficulty. It is of the non-exudative type—that is, with little or no edema, and corresponds to our interstitial type of nephritis. A chloremic nephritis is one in which the chlorides, etc., are excreted with difficulty. It is of the exudative type, and corresponds to our parenchymatous nephritis. A vascular nephritis is one that corresponds to our arterio-sclerotic kidney.

Previously, we depended entirely on the presence of casts, albumin, specific gravity, amount of urine, etc., to make our diagnosis, and in most cases it is still quite sufficient, but these findings give us only meager information as regards the functions of the kidney. Therefore, it is not only necessary to make a careful urinalysis, but a blood examination also. We know that the presence of albumin and casts does not always mean a nephritis, for example, Gentzen examined 150 different people, and found granular casts in 36, hyaline or granular in 60. It is well known that athletes, after severe exertion, have an albuminuria. Exposure to cold, lordosis, and other things may also cause it. If, however, the patient has albumin and casts over a period of time, one can readily make a diagnosis of nephritis, but in order to know the functioning power of the kidney, a blood examination is also desirable.

In recent years, the work done on experimental nephritis by Schlayer and others, has done a great deal to advance our knowledge of just what portion of the kidney is most severely damaged. By use of certain drugs, for example, uranium, chromium, mercury, etc., they have been able to produce a tubular form of nephritis, and by the use of arsenic or cantharides, to produce a glomerular (vascular) type. These poisons cause, for the most part, an acute nephritis, but more recently chronic forms have also been produced. Schlayer has also devised certain functional tests by which he differentiates these various types. He found that in the glomerular (vascular) type the elimination of milk sugar was disturbed, while in the tubular type, the elimination of potassium iodide and sodium chloride was interfered with. By comparing experimental nephritis and nephritis in man, he found the same rules to hold true. Therefore, through functional testing, he was able to determine that disturbance in the elimination of milk sugar pointed to a lesion in the glomeruli, and that a disturbance of elimination of sodium chloride and potassium iodide, depended on a lesion in the tubuli.

Potassium iodide has been used in functional testing for a long time, but has been of little value until more recent years. The technique is as follows:

Give one-half gram of potassium iodide in a capsule, at 12 o'clock, noon; then forty hours after the patient has taken it, collect the urine hourly, until all the iodide has disappeared. Normally, it should appear in the urine one-half hour after it is taken, but this is of little value. The important thing is that it should all be excreted after 40 or 50 hours. Some claim that its elimination can normally last to 60 hours, but all over sixty is surely pathological. Sandow's method for the detection of iodides can be used. It consists in adding 1 cc. of a 2% sodium nitrate solution, and 1 cc. of a 10% sulphuric acid, to from 10 to 30 cc.'s of urine, followed by the addition of a small amount of chloroform. This is shaken together, and allowed to separate into layers, the presence of iodides being indicated by a purplish red or violet color in the chloroform.

To test the glomeruli, a ten percent milk sugar solution is used. This solution is sterilized by pasteurizing it on three successive days for four hours. (Eppinger says 24 hours.) 20 cc.'s of this sterile solution is injected intravenously, and the time it takes to eliminate all of the milk sugar is noted. Schlayer estimated the sugar excretion with the polariscope, and found that normally, it would all be excreted in four hours. If one has no polariscope, use Neilander's test.

Bauer says if Fehling's solution is used, we should only consider the excretion pathological if it extends over 8 to 10 hours. Quantitative estimation of the sugar output is also made, but this is of less value. About 75% should be out in four hours. Eppinger has noted that if an angina is present during the time of your lactose experiment, the sugar is excreted much more slowly, so this factor must not be overlooked. This observation, however, shows what an important bearing a tonsilitis has in the production of nephritis.

The elimination of potassium iodide and sodium chloride was found by Schlayer and his co-workers to run along parallel, also the elimination of milk sugar and nitrogen retention were more or less parallel. However, the rate of lactose elimination cannot replace the estimation of the non-protein nitrogen in the blood. The excretion of lactose is relatively delayed in many cases of nephritis, and it is possible that this test may prove of value as a very sensitive indicator of slight renal damage. From a practical standpoint, however, such injections are objectionable because they, like other intravenous injections, may be followed by violent febrile reactions unless scrupulous care be taken to avoid the so-called water fever. In view of the fact that we are still very uncertain as to the normal functions of the renal tubuli and glomeruli, it seems better for the present to discuss kidney disease, not from the standpoint of deficiencies in these particular parts of the kidney, but from the standpoint of deficiencies in the elimination of substances normally excreted without regard to the portion of the kidney involved. A discussion from this standpoint is further justified by the fact that retentions of sodium chloride or of nitrogen waste, are associated with definite symptoms, and that they furnish valuable data for prognosis and therapy.

Therefore, the classification of azotemic, chloremic and vascular nephritis seems to me to be the most logical one that we have at the present time.

Schlayer and Hedinger devised certain test diets by which they could estimate chloride retention or nitrogen retention. The excretion of chloride is tested in the following manner: Put the patient on a diet in which the amount of chloride is definitely known (about 4 to 6 grams). The chloride excretion is then carefully determined, and the daily balance is estimated. Normally, the output should be as much the the intake. If less chlorides are put out than are taken in, one has a negative balance, that is, some chlorides are being retained. After having had the patient on this diet for fourteen days, and the chloride balance has been estimated, add ten grams of sodium chloride to the diet, and note again the amount of chlorides that are excreted, also, the time it takes this additional ten grams of sodium chloride to be excreted. Normally, all should be excreted in 24 hours, but if we have a chloride retention, it will take 48 or more hours to get rid of the additional ten grams.

A nitrogen balance can also be made at the same time the chloride balance is being estimated. The ordinary man eliminates from fourteen to eighteen grams of nitrogen, depending, of course, on the proteid intake. Folin says that 87½% of the total nitrogen output is in the form of urea. The elimination of urea is easily estimated, and from this the total nitrogen can be estimated. After the nitrogenous balance has been taken, Monakow gives an additional 20 grams of urea which should normally be excreted in 24 to 48 hours. More recently, Mosenthal has devised a renal test diet. (This can be obtained from Vol. 16, pages 733-774, November, 1915, Archives of Internal Medicine.) The test is a qualitative one of the mode of urinary function, as measured by the specific gravity, salt, nitrogen and water excretion in two hourly periods during the day, and for a twelve hour period at night.

The normal individual yields specimens with specific gravity figures which vary ten points or more from the highest to the lowest, a night urine high in specific gravity, 1,018 or more, high in its percentage of nitrogen, above 1 per cent, and small in amount (400 cc.'s or less.) The quantity of water, salt and nitrogen excreted approximate the intake. When kidney function becomes involved, the first signs are usually demonstrated in the night urine, the quantity becomes increased, the specific gravity and nitrogen concentration are lowered. One or all of these changes from the normal may occur. In severe cases of chronic nephritis, an advanced degree of functional inadequacy of the kidney is indicated by a markedly fixed and low specific gravity, a diminished output of both salt and nitrogen, a tendency to polyuria and a night urine showing increased volume, low specific gravity and low concentration. Sunch functional pictures are, however, not confined to nephritis. They are found in other conditions, pyelitis, cystitis, hypertrophied prostate, marked anaemia, pylo-nephritis, polycystic kidney and diabetes insipidus. The cause of the diminished renal function must be sought for in the urinary passages, the blood, or the kidney itself.

The above methods require close observation of the patient for some time, which in many cases is impossible, so Ambard improvised a method which makes this unnecessary. He found by experience that there is always a proportional relationship between the chlorides of the blood and the chlorides of the urine. The same holds true for the urea of the blood and that of the urine. By a series of formulas he estimates the amount of chloride and urea retention. The technique given by Bauer for the above, is as follows:

At 10 a. m., have your patient void. At 10:10 draw 100 cc.'s of blood. At 10:36 have your patient void again. The time consumed here is only 36 minutes, and to get the total quantity of urine for 24 hours, multiply 36 times 40 (24hours times 60 minutes equals 1,440 minutes). In the blood, he estimates the non-coagulable nitrogen, the urea and the chlorides. In the urine, he estimates the urea and the chloride. Then by the series of formulas above mentioned, he estimates the retention of the chloride, also the amount of urea retained. This urea factor he calls Kappa. Normally, Kappa is from 0.06 to 0.08. When Kappa is more than 0.2, the prognosis is not good, and if this is found in a prostatic case, operation is to be avoided.

Unfortunately, the calculation of Ambard was made upon hypo-bromite determinations, but the principle has been confirmed recently with more trustworthy methods of McLean and Selling. These formulas are more or less complicated and too difficult for the ordinary laboratory worker to use, and also some men have discontinued their use because they claim no real benefit is to be derived by the use of this coefficient, and that the results are not trustworthy. Indigo carmine, methylene blue, cryoscopy of the blood and urine have been used, but are not of as much value as the newer methods.

The phenolsulphonephthaleіn test of Rowntree and Geraghty has done more to advance our knowledge of kidney function than any simple method that we have to date. It is still being used by all clinics of the east as a routine in all cases of nephritis, and if checked by our more accurate methods, it gives very valuable information. It is the test of choice to be used if one has no facilities for doing blood chemistry, and it offers considerable information as regards the functioning power of the kidneys. The test is so simple and so well known by all of you that I will omit its technique. This is also the test of choice if one wishes to estimate the separate functioning power of each kidney.

Investigators, more notably Folin, Denis, Benedict, Myers, Fine, Chace and others, have been constantly at work to simplify blood chemistry by colorimetric methods, so that ordinary laboratory workers can use this valuable aid in the renal diagnosis.

The non-protein blood constituents are urea nitrogen, uric acid, creatinine, creatine, sugar and chlorides in the form of sodium chloride and cholesterol. The normal amounts of these constituents are as follows:

| | |
|---|---|
| Non-protein nitrogen | 25 to 30 mgms. per 100 cc. of blood. |
| Urea nitrogen | 12 to 15 mgms. per 100 cc. of blood. |
| Uric acid | 1 to 3 mgms. per 100 cc. of blood. |
| Creatinine | 1 to 2.5 mgms. per 100 cc. of blood. |
| Creatine | 5 to 10 mgms. per 100 cc. of blood. |
| Sugar | 0.08 to 0.12% |
| Chlorides as sodium chloride | 0.65% |
| Cholesterol | 0.15% |

The total nitrogen is eliminated in the proportion of 15 grams per day. It leaves the body as follows:

| | | | |
|---|---|---|---|
| Urea | (grams) 25 | (12gms. N) | 85% |
| Creatinine | | 1.5 | 5% |
| Uric Acid | | 0.5 | 2% |
| Ammonia | | 0.5 | 4% |
| Rest Nitrogen | | 0.5 | 5% |

The following table taken from Gradwohl, will give an idea of blood pictures in gout, diabetes and nephritis:

In digestion the protein matter is broken down into amino-acids, which are picked up by the blood. Some of the amino-acids are retained, others are transformed to ammonia and eliminated. The greater part of the nitrogen which is eliminated is exogenous, and its elimination occurs in the form of urea. The blood holds up the carbonates and preserves the neutrality by this means by eliminating or getting rid of the acids. The greater part of the acids in the urine are made up of the acid phosphates derived from the blood. When the blood is no longer able to get rid of its acid, it calls upon its ammonia for help. The source of creatinine is entirely endogenous. It appears to be fairly well established that creatinine resides in muscle and that it is constantly present in the blood in about the same quantity at all times in health in the adult.

For a long time only the total non-protein nitrogenous elements of the blood were estimated, but today, the creatinine is found to be of as much value, if not more value than the above. Uric acid is partly exogenous and partly endogenous, about half and half. If liver is eaten, we can raise the amount of uric acid present. It comes from prurine, then changes to xanthin and then to uric acid. It has to be de-ammonized before the change to xanthin takes place. This takes place by hypo-xanthin being formed from adenin, and xanthin is formed from guanin. The second part of the process is an oxidation, i. e., the conversion of hypo-xanthin into xanthin, and this converted into uric acid. Uric acid, therefore, is the chief end product in man of nucleoprotein metabolism.

The most easily excreted of these products, is creatinine; second, urea, and third, uric acid. Therefore, the uric acid is first to be retained in early cases of nephritis. As the nephritis progresses, the urea of the blood becomes increased, and last of all, as it further progresses, the creatinine in the blood is increased. By the new colorimetric method, it is comparatively easy to determine all of these substances.

A hyper-glycaemia also exists in severe nephritis. This is another reason why blood sugar should always be estimated. The routine examination which is usually carried out is as follows: Estimation of urea, estimation of creatinine, and an estimation of blood sugar. At the same time it is important to estimate the $CO_2$ combining power of the patient's blood plasma. Also, the alveolar $CO_2$ tension is estimated. The $CO_2$ combining power is done by the Van Slyck method, and the alveolar $CO_2$ tension by the Marriott method.

The uric acid takes considerable time in its estimation, and is usually omitted, unless some special reason for its estimation exists. The cholesterol is also difficult to estimate, and as yet, has no real practical value, therefore, unless some special indication exists, it is not estimated.

By these newer methods, the therapy of nephritis is put on a more rational basis. First of all, nothing is so important to a nephritic as his diet, and a diet can now be much more scientifically arranged than in former years. In acute uremias, all that some give is sugar water for several days. Carbohydrates have a valoric value of 4.1, and hence sugar water is quite useful. In former years, all cases of nephritis were put on a milk diet. This is no longer done because we know that milk is not suited for all cases and it soon gets tiresome. One quart of milk. The normal fluid intake is about 1½ 70 kilos requires about 2,100 to 2,400 C. and this would require at least three quarts of milk. The normal fluid intake is about 1½ quarts, hence there is an excessive amount of fluids in 3 quarts of milk. If we cut it down to 1½ quarts we under-nourish our patient, and this cannot be carried out for any length of time. The excess of fluids in 3 quarts of milk in vascular nephritis, is harmful on account of the extra work thrown on the heart. In azotemic nephritis, a low proteid diet should be given. About 50 grams of proteid is the lowest we can give our cases if we do not wish to use up the proteid of the body. One and one-half quarts of milk have about 50 grams of nitrogen, so 3 quarts has about 100 grams, and this, of course, is too high for some cases. Three quarts of milk has 6 grams of sodium chloride, which is also high. Milk, however, in properly selected cases, makes an ideal diet. We can materially add to the caloric value of milk by using cream. One quart 20% cream has 2,200 C and only 40 grams of proteid. This also markedly lessens the fluid intake. Cream can be used on cereals, etc. Oil can be used on salads, and in this way increase the food value.

After Widal's work on chlorides, all cases were put on a chloride-free diet, but this at present is only used in those cases that have oedema; that is, in the chloremic type. If one will follow a few general principles, a proper diet is easily made by consulting any of the numerous diet tables.

1. In azotemic nephritis, low protein diet.

2. In chloremic nephritis, chloride-free diet and restricted fluid intake.

3. In vascular nephritis, fairly liberal diet, but restricted fluid intake.

In this way, I believe, our cases will receive more scientific and better treatment.

## The Diagnosis and Management of Cardio-Vascular Renal Disease.*

John W. Shuman, M. D., Sioux City, Iowa.

The histological examination of the kidney has shown that in a great number of cases nephritis is not recognized during life. That is, the usual examination of the urine does not reveal either the presence of albumin or casts in spite of a destruction of the secretory apparatus of the kidney. This shows that in the routine examination nephritis is often overlooked. Many cases coming to the autopsy table previously diagnosed as nephritis show no evidence of nephritis. The more modern functional tests are necessary to establish a diagnosis of nephritis.

Prior to special tests a careful history of the patient must be taken and a physical examination made. In the early stage of the disease the symptoms and signs are those of hypertension, namely; high systolic pressure, an enlarged left ventricle, functional disturbance of the kidneys and headache. In the history of nephritis, infections (scarlet fever and diphtheria) play an important role. Focal infection must be searched for, both in the history and in the physical examination. In obscure cases in which acute infections can be excluded, syphilis should be considered as a causative factor.

Metabolic disturbances too, may be the cause of nephritic changes, particularly in the obese. Exposure to cold and dampness has long been recognized as a causative factor in nephritis as shown by animal experimentation and clinical observation.

The routine taking of blood pressure should be followed. This should not be taken by palpating the radial pulse without the sphygmomanometer, it has been tried but not successfully. Systolic and diastolic pressure should both be recorded. The ear should be used instead of the finger and the mercury column is to be preferred over the spring instrument. The diastolic pressure tells us more than any one thing of the condition of the myocardium. Only last week I found the systolic pressure 175 m.m. Hg. in a man of twenty years and the diastolic pressure 65, pulse rate 95. He was suffering from a mitral two-way leak. On account of the hypodiastolic pressure myocardial weakness is present.

In the majority of hypertensive cases the renal vessels are sclerosed which causes a slow destruction of the functional structures of the kidneys with the production of connective tissue (nephro sclerosis or interstitial nephritis.) This destruction of the secretory epithelial cells disturbs the elimination of autotoxines which appear to have a specific affinity for the cardio-vascular apparatus. The derangement is generalized throughout the vascular system causing a sclerosis of the vessels with a corresponding diminution of the vessel-wall elasticity as well as an endarteritis, which throws an increased burden upon the heart resulting ultimately in hypertrophy of that organ.

A roentgenoscopic study of the heart should be made in every case. I have lost all confidence in the art of percussion when I want to know the cardiac outline. With the use of the roentgen rays and screen one can study the heart's location, position, and outline. If the left heart is enlarged it can easily be detected. Often if the tension is high, an incompetence of the mitral valve can be detected with the ear. There may be a mitral murmur due to a non-infectious valvular irritation, that is, due to a chemical irritation of the endothelium of the valve. There may also be a friction murmur noted in these cases, heard best over the lower anterior precordial area.

The older qualitative urine analyses are not sufficient to detect abnormalities of the renal functions. Quantitative estimations of the important constituents of the urine including the twenty-four hour urinary output are necessary. The ratio of urea nitrogen to the total nitrogen, both in the urine and blood is a constant in the normal. A decrease in this ration in the urine results in a greater increase in the blood ratio, at once affording a valuable clue to renal disturbance. This determination requires elaborate laboratory equipment and is out of the question for the general practioner.

---

*Read by invitation before the mid-winter meeting of the Elkhorn Valley Medical Society, held January 30, 1918, at Fremont, Neb.

The most valuable, dependable and relatively simple method is the phenolsulphonephthalein test (Rountree and Garrity). In general this test according to Smith (J. A. M. A., Vol. 68, 4, 280) parallels the index of urea excretion; but there are marked exceptions to this rule, in which the phenolsulphonephthalein apparently gives an erroneous conception. This clearly shows that the application of one test is sufficient, but a longer period of observation, with the patient on a quantitatively regulated diet with corroborative tests (solids for 24 hours, methylene blue, potassium iodide), is necessary.

Sooner or later, in most instances of this disease, the heart will hypertrophy. Just as long as the circulation in the heart itself is good and not impaired by coronary sclerosis and as long as this slowly developing chronic myocarditis has not advanced far, cardiac symptoms will not be in evidence. But if these conditions occur, or if the blood pressure becomes so great as to damage the aortic valve or strain the left ventricle, symptoms rapidly appear. Therefore the heart must be carefully and repeatedly examined.

In all cases of hypertension, the kidneys should be considered the primary cause, always remembering that there are other causes of hypertension (cerebral lesions, excessive adrenalin). With a destruction or atrophy of the glomeruli and a decrease of the caliber of the arterioles it takes a greater than normal pressure to force the blood through them. As a result the left heart is overworked. When the myocardium tires, circulation of the blood becomes retarded and the elimination of toxines less than normal. These toxines irritate the brain cells which swell, causing increased pressure (headache).

Finally as the disease advances, if the patient does not die of uremia, acidosis or angina pectoris, symptoms of cardiac decompensation develope. As the heart fails, passive congestion or cloudy swelling of the kidney takes place and the chronic interstitial nephritis progresses rapidly. In which instance it is very difficult to tell whether cardiac or renal insufficiency is predominating. As the heart fails the blood pressure becomes lower, especially is this true of the diastolic. The more insufficient the kidneys, the higher the blood pressure especially the systolic. If the swelling is in the dependant portion of the body, greater in the morning in the back and face, it is the heart that is rapidly failing. If the swelling is general and there is headache, vomiting, with perhaps stupor and coma, the most serious trouble at this particular time is renal insufficiency.

We will have to have a more detailed knowledge of the disease before we can determine where incipiency ends and chronicity begins. This knowledge can be acquired only by checking our clinical observation by post-mortem examination of the cardiorenal vascular system. It is of the utmost importance that the clinician cooperate with the pathologist. As a rule the pathologist makes a careful examination of the kidneys and determines by the most modern methods the specific changes of the renal structures. In the last twenty years a vast amount of data has been secured by the pathologist and the changes in the kidney have been classified on a pathological basis. The clinician has neglected to collect accurate case anamnesis by which a diagnosis of the different forms of nephritis during life could be correlated with the pathological findings.

Of the numerous clinical and pathological investigations of nephritis and hypertension during the last three decades the most valuable and important is that of Volhard and Fahr (Monograph, Klinische and Pathologische Untersuchung fur Nephritis), who carefully studied several hundred cases from a clinical as well as from a pathological standpoint. These investigations have established the underlying principles by means of which a diagnosis of the different forms of nephritis can be differentiated during life. According to these authors two types of nephritis, benign and malignant are recognized. The former is, accompanied by an increased tension, the latter is not. The benign shows an involvement of the renal tubules only, while the malignant shows a destruction of the glomeruli combined with tubular changes.

### Case Management.

To prevent the actual occurrance of this cardiovascular-renal disease is meritorious. All infections should be prevented when possible and when present, eliminated so that the present generation will go into senility minus the beaded and tortuous arteries and knotted and twisted joints of its grandparents. However when the trouble is discovered we must retard its progress. Certain symptoms often demand relief, e. g., headache or a failing heart. It is advisable then to lower the blood pressure.

That the high tension is a compensatory factor is well known but often forgotten. A careful study of the patient's conditions and symptoms will indicate if a reduction of the pressure should be attempted. In the early stage no drugs should be used. The diet should be carefully regulated. Meat should be reduced to a minimum. Each case is an individual study. The amount of exercise depends upon the condition of the circulation. Generally these cases lead to a sedentary life. Graduated walking, hill climbing, and golfing are good exercises but should be prescribed as carefully as a dose of digitalis.

Mental as well as physical strenuosity must be eliminated. This is no easy task, but one of vast importance. Sleeplessness is to be combated, perhaps actually treated by morphine. Hot packs, electric light baths or body baking is advisable in the preuremic seizures. Preuremic or billious attacks are brought on principally by overeating, augmented by a diminished accessory elimination, i. e., by skin and intestinal tract.

In obesity, stimulants to the appetite such as alcohol, spices, condiments and even sometimes salt must be prohibited. Butter, cream, sugar and starches should be minimized. In short the food intake should be so regulated that a steady but slow loss of weight to the point desired has been accomplished. The weighing of the patient every other day indisputably proves if the 'diet slip" has been followed. All cases, except the terminal ones, should be acquainted with their condition. They will then intelligently cooperate with the physician.

I wish to state in this connection that I have observed a number of hypertensive cases, one with a blood pressure of 200, who were extremely stout, who regained and retained a normal blood pressure following a return to, and the maintenance of a normal weight. No doubt some of you have met with the same experiences. One would interpret the etiological factor, metabolic disturbance. This is true and therefore metabolism has a role to play in all cases of hypertension.

In the late stage cardiac insufficiency is encountered and is best handled by rest. Rest in bed takes a considerable load off of the heart. Bleeding as a therapeutic agent is often a valuable aid. If the diastolic pressure is not high digitalis is valuable. If there is no cardiac dropsy but other symptoms of heart fatigue "bleeding the patient into his own veins" is a good thing (nitrites). In sudden heart weakness, providing digitalis has not been given in large doses a short time before, strophanthin (gr. 1/200) may be given intravenously once. When there is great sleeplessness, morphine is most surely "the finger of God." Baths, massage, etc., are too depressing and exhausting in these cases.

If fragile arteries (sclerosis) are present, hemorrhage as the result of a fracture of a capillary is to be guarded against. The flag of danger for the hypertensive case is generally headache. My motto in these cases is to try and keep the systolic pressure at or just below where headache is complained of.

## *Treatment of Certain Fractures Occurring in or Near Joints.

C. H. Newell, M. D., Omaha.

It is not our purpose to discuss all the various methods of treating the group of fractures to which I wish to call your attention, but rather to remind you of a few of the principles underlying the treatment of a very interesting, and I might add—often neglected group of fracture cases. I shall purposely refrain from a discussion of any of the open methods of treatment, and call your attention to a few methods of diagnosis and a few dressings for some types of fractures, which have always given most of us a very considerable amount of uneasiness. They are all simple and practical and each one is available for use by the general practitioner upon whom falls, after all, the burden of attending the majority of fracture patients.

In the treatment of fractures near or involving joints, one hopes to accomplish the following:

First—To make a proper anatomical diagnosis of the condition and this of course always where possible by means of radiograms.

Second—To get as near a perfect function

---

*Read before Omaha-Douglas County Medical Society, 1917.

as possible even (except in few cases) at the expense of the cosmetic result.

Third—To apply a dressing, which while being efficacious will also be comfortable to the patient and admit of necessary observation by the physician, and

Finally—To begin very early active and passive motion and massage, in the affected joint. This last mentioned principle for which we have to thank the French, is the teaching of Lucas Championiere and we believe it to be most important in successful treatment of joint fractures.

The most frequent of the fractures I wish to mention, is fracture of the bones of the elbow joint, especially in children, and no doubt all of us have patients in whom complete or partial ankylosis of the elbow joint is a source of much annoyance to us.

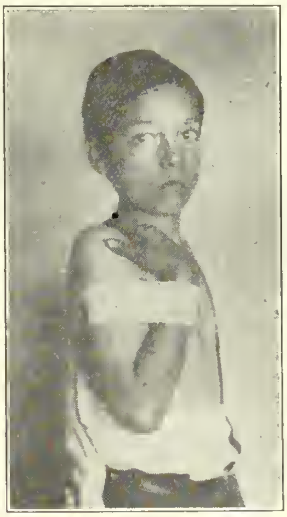


Fig. I. Jones Position.

Since adopting the following method of treatment it has been our good fortune to discharge all patients with a joint 90% to 95% perfect. Under anaesthesia the parts are replaced as nearly as possible in correct position and apposition and then with only one exception all are put in the Jones position of extreme hyperflexion.

This means that the hand should be on the shoulder of the affected side and the forearm flexed on the arm as acutely as possible, without interfering with the radial pulse. Next, one long narrow strip of adhesive plaster is passed around the forearm at the wrist, continued around the arm just below the axilla and the dressing is complete. No sling or other dressing is needed and after a few hours' time one is surprised to find how comfortable the dressing has become and it continues to be so until removed. If the dressing is not comfortable it is probably too tight.

After about six or seven days, the encircling band of adhesive is cut front and back and about three or four inches of plaster inserted, allowing about 15° of motion in the joint. We realize, of course, that at this time no new bone has formed, but the soft parts have so adjusted themselves that this much motion is permissable. The patient is advised to actively flex and extend the forearm as much as the dressing will permit. If it is in a child of course the motion must be passive. The procedure of lengthening the encircling bands is repeated again about the 10th or 12th day and at intervals of a few days until at the end of three weeks the band is removed and the patient is encouraged to practice both active and passive motion as much as possible. During all this period the parts should be massaged vigorously several times daily.

The advantages of this dressing are:

First—Its simplicity.

Second—It's general adaptability — fractures of the olecranon being the only ones about the elbow joint which cannot be treated in this manner.

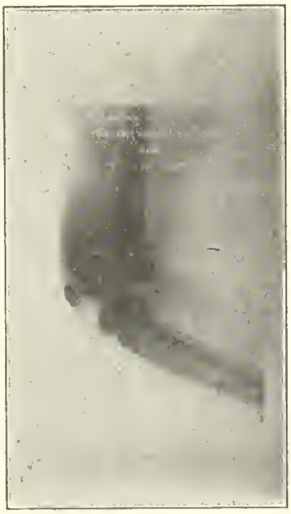


Fig II.
Separation of Epiphysis of Femur.

Third—It is possible to start immediate massage and very early motion, and to, at all times observe the parts; and

Finally—When the patient is discharged

any limitation of motion will be in the direction of extension. This is preferable inasmuch as most of the patient's involuntary motions are in this direction, whereas, if the limitation were in the act of flexion, any attempt to overcome it must necessarily be a voluntary effort, as a consequence the effort is usually not made, and the limitation becomes permanent. The dressing must be carefully observed for evidence of constriction. This is manifested by cyanosis in the parts, cold hands and fingers, swelling, etc. A dressing which is too tight might do irreparable damage in a very brief period. One very distressing sequel being that of Volkman's contracture, an acute myositis in the muscles of the forearm and hand, which produces a very grotesque and usually permanent distortion. The treatment above described for fractures about the elbow suggests a fracture especially frequent in children and which is in many ways analagous to elbow fractures. I refer to separation of the epiphysis at the lower end of the femur.

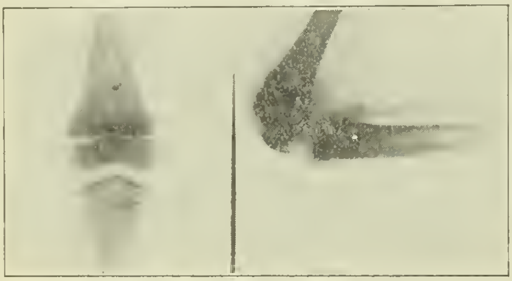


Fig. III.
Showing degree of flexion and extension usually obtained by method described.

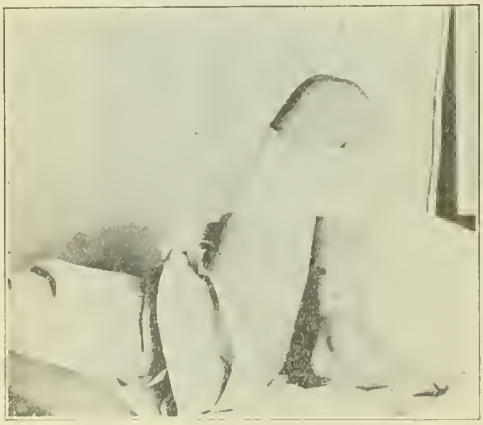


Fig. III A.
Position of parts following reduction of Epiphyseal Separation of Femur.

The application of a dressing to keep the leg in acute flexion on the thigh fulfills the postulates above mentioned. Naturally, the treatment of a fracture in this location requires that the patient remain in bed. After reducing the fracture and putting the leg in acute flexion, a wide band of adhesive is placed around the leg at the ankle and continued around the thigh at that level. No further dressing is necessary, and the subsequent treatment is carried out as described above for elbow fracture.

A discussion of Colles' fracture offers some interesting points in diagnosis and treatment. While the diagnosis is simple when the parts present the typical silver fork deformity, there are many cases in which this is not present and in which the distal fragment of the radius is impacted in such a manner that even a radiogram is at times difficult of interpretation. This is always accompanied by an anterior dislocation of the ulna with or without a fracture of the styloid process.

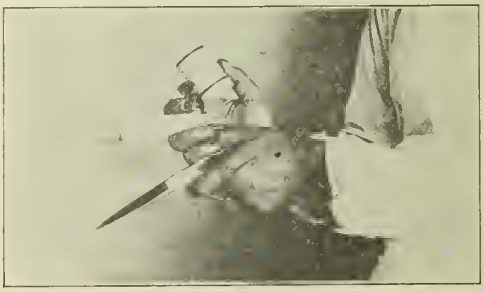


Fig. IV.
Showing the few things necessary for application of Moore dressing.

Dr. Skinner of Kansas City has devised a method of more easily making a correct reading of the radiograms by the application to the plate of certain lines by which the improper anatomical relationship of the fragments is rendered more obvious. This also aids us in telling whether or not we have properly reduced the fractures, as often an attempt at reduction may reduce the deformity but not replace the fragments in correct position. The dressing for a properly reduced Colles' fracture may be made very simple and we have found the Moore dressing to best serve the purpose. One first reduces the fracture under anaesthesia and this is one instance wherein it is always necessary to break up the impaction, if any is present. This is very important.

All that is required for a Moore dressing is a piece of adhesive plaster and a 1½ inch gauze bandage. One first rolls up like a cigarette and very firmly about one yard of the gauze bandage. This make a suitable pad to be placed on the flexor side of the wrist under the displaced head of the ulna to keep it in position. Next, one encircles the wrist with a band of adhesive plaster about two inches wide and includes within it the little roll just described. After this is firmly adherent to the wrist it is cut down the dorsal side to admit of any swelling without constricting the parts. The patient is then given a light, narrow sling which supports the arm just at the wrist, but allows the hand to drop down. While we believe it perhaps unnecessary, we feel a little safer to apply light anterior or posterior board splints for a short time, especially at night, to protect the part from further injury. In about two and one-half weeks the patient is advised to make flexor and extensor motion in the wrist and after four weeks the dressing is removed and light use of the wrist allowed.

Fig. V.
Application of Moore dressing for Colle's Fracture.

Another very interesting fracture which is, we believe, more often mistreated than any other, is the socalled inversion fracture of the ankle. I believe that the late Dr. John B. Murphy deserves the credit for calling the attention of the profession to the great importance of differentiating this lesion from a true Pott's fracture, with which it is so often confused, and for which it is so often treated. To fully understand this condition it will be necessary to consider briefly some of the anatomical points of a genuine Pott's fracture, which are as follows: First—It always occurs with the foot in abduction.

Second—There is always a fracture of the fibula, at or above the articulating surface of the tibia, and usually a displacement of the lower fragment.

Third—A laceration of the inter-osseus ligament.

Fourth—A fracture of the internal malleolus, and either a tearing of the internal lateral ligament or a fracture through the outer articulating surface of the tibia.

In an inversion fracture, the anatomy is altered in a decidedly different manner. The fibula may be fractured as in a genuine Pott's fracture. The tibia is then fractured through its articulating surface, but through its inner, instead of its outer part, as in a Pott's. All of the inner portion of the articulating surface of the tibia (the fragment extending upward, sometimes as far as two inches), is carried inward and upward. With this in mind, one can readily see that the classical position of extreme inversion in the treatment of this fracture would be directly opposed to the dressing indicated.

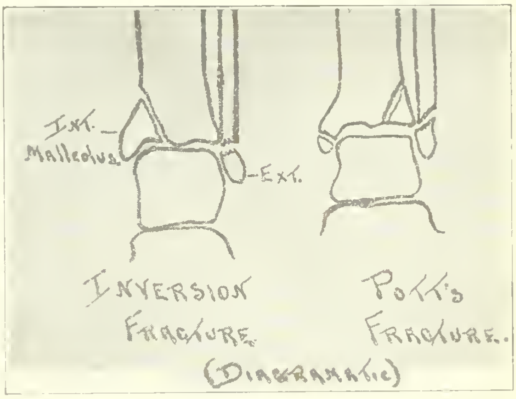


Fig. VI.
Lines of fracture in Pott's and Inversion Fractures.

I believe, indeed, that the majority of bad results in fractured ankles, is a direct result of mistaking an inversion fracture for a Pott's and applying the dressing as indicated in the latter. The mistake just recited always results in a marked deformity at the ankle, the astragalo-tibial articulation being found at an acute angle with the long axis of the tibia, instead of at a right angle which is the normal position. The patient is found later to be walking on the outer surface of the foot.

The differential diagnosis is to be made on two factors.

First—From the history that the fracture took place with the foot in inversion, the diagnosis is clear, the individual is suffering with an inversion fracture. Secondly—Without the history and, of course, much more reliable, is a radiogram. If one sees a fracture through the inner part of the articulating surface of the tibia, the diagnosis is again evident, an inversion fracture, and is most certainly not to be put up in a position of extreme inversion.

While the limited time at our disposal does not admit of discussion of all, or even most fractures, involving or near joints, I hesitate to close without calling to your attention at least one more very important lesion, the overlooking of which entails not only unnecessary suffering on the part of the patient, but often some more or less permanent injury. I refer to what we might call a sprain fracture.

It has been our experience since making radiograms as a routine in all injuries about joints, to have observed many cases of fracture in the joint region with little or no displacement and which have been diagnosed as simple sprains. I am indeed reminded of one patient who, while in Texas, sustained what was diagnosed as a sprained ankle, who upon reaching Omaha two weeks later was found to be suffering with a Pott's fracture. This is especially true of fractures of the small long bones.

---

## Physical Examinations of Applicants for the Aviation Service, U. S. A.

Frank M. Conlin, M. D., Omaha.

From July 13, 1917, to present date, the Aviation Examination Unit of Omaha have given complete physical examinations to about 920 applicants for the Aviation Service of the United States Army. All of these men come to us after having had a preliminary examination, the report of which accompanies their application. I mention this so that you may know that for this reason the number of rejetcions must necessarily be small, any obvious physical defect having been found in this preliminary examination. Most of these men are college men—a large number of them have been in athletics while in college. This combined with the fact that the ages run from 19 to 30, it is apparent that the physical condition of these applicants should be of the best.

The method of examination is as follows: The applicants are instructed to strip after each has been given a number and instructed to urinate in a bottle labeled with a number corresponding to this number. They are then taken into a closed room one at a time for examination. A general inspection is made of the applicant as he enters the room and gets on the table. He then is asked regarding a history of scarlet fever, rheumatism, chorea, tonsilitis, asthma, malaria, meningitis, sleep-walking, stammering, and regarding a family history of tuberculosis and heart disease. The history of venereal diseases is also gone into, but almost without exception these diseases are denied. We have been struck with the frequency of heart lesions associated with scarlet fever, rheumatism, chorea and tonsilitis and carefully examine any giving this history. The instructions to us from the Aviation Examining Board are to reject any man giving a history of asthma and of malarial attacks in the last six months, also to be careful about passing applicants who have been in tropical countries, for it has been found that they cannot stand the cold of the high altitudes to which an aviator must go. A history of fainting or loss of consciousness is important as it may signify either a heart lesion or epilepsy. A history of migraine is looked for also because it is well known that there is a close association between migraine and epilepsy; hence, any one giving a history of these diseases is rejected.

In the general examination, we have found one case of lues that was denied by the applicant in giving his history and was later admitted when we found the scar of the needle point in his arm where he had been given treatment for this disease. One case of lues was found with the initial lesion and another with the scars of tertiary lesions. We have found ten sub-acute gonorrhoea cases and fifteen chronic gonorrhoea, all of which have been denied by the applicant when his history was taken.

A history of accidents and operations is then taken and accidents resulting in injury to the brain inasmuch as they are particularly liable to cause trouble at some future time are considered cause for rejection. Any permanent disability following an operation or accident that may interfere with the applicant's functions as an aviator disqualifies him.

Under the general inspection of the applicant made upon the table, the appearance of the skin is carefully noted, and if he has any one of the general skin diseases like a severe acne or a psoriasis that would make him repulsive to his tent mates, it is considered cause for rejection. The expansion of the chest, the position of the apex beat, and the presence of any deformities are noted. The average expansion of these applicants is between four and four and one-half inches.

If the physical examination reveals a chronic bronchitis and asthma or an emphysema, it is considered cause for rejection. Not so much attention is paid to the history in lung conditions as is paid to the findings in the lung, particularly after exertion. We have found two cases of chronic bronchitis, one case of pulmonary tuberculosis with an involvement of the right apex and right base, combined with a pleurisy, and another case of tuberculosis of the fibroid type involving particularly the apices.

The heart is next examined for any definite signs of organic disease. Most attention is paid to the pre-systolic murmur of mitral-stenosis or the diastolic murmur of an aortic regurgitation, and in the absence of other physical signs such as an enlargement of the heart, accentuation of the second pulmonic sound, change in the pulse rate, dyspnoea on exertion, combined with a history of some one of the acute infectious diseases, little attention is paid to the ordinary systolic murmur that is so frequently heard over the chest, particularly in young individuals. About eight per cent of all of the cases that we have examined showed a systolic blow at one or the other of the orifices. A diagnosis of patent ductus Botalli was made in one case, the man never having had any symptoms of any heart lesion previously. According to the rules of the Aviation Examining Board, no attention is paid to congenital lesions where the applicant has reached the age of 18 without symptoms. We have found two cases of mitral stenosis, about twenty cases of mitral regurgitation. We have found no aortic regurgitation, probably due to the fact that this is a disease which attacks individuals later in life. Adherent pericardium is a cause for rejection on account of the fact that it frequently interferes with the heart action, but we have found no evidence of it in the men which we have examined.

### Heart Action.

A slight irregularity in the heart action quickening during inspiration and slowing during expiration, in other words a sinus irregularity, or "youthful irregularity," as it is sometimes called, is not a cause for rejection. We have seen about twenty, the irregularity varying from time to time, the excitement of the examination at the examining unit bringing it out more markedly than when the patient is seen at the office. The occurrence of extra systoles or premature contractions as manifested by an occasional misbeat are not uncommon nor serious and usually accompany a neurotic or high strung make up. We have seen a number of these. As Cabot has said "one cannot judge of the seriousness of a heart lesion by the loudness of the murmur," so also we cannot judge of the heart action by the intensity or weakness of its sounds. The heart may on physical examination sound and appear normal, but by testing out the cardiac efficiency by exercise defects are brought out. It has always been the rule to put these applicants through a series of exercises ending with a stationary run, then to reexamine the heart for any difference in its action.

### The Pulse Rate.

The average pulse rate for this series has been 81, but we have frequently had applicants showing a pulse of 110 to 130 due to the excitement of the examination and the impossibility of control of the heart action. A slow pulse in these applicants is a good sign because its presence excludes many cardio-vascular conditions. We have found quite a number of these men with this rapid pulse and our rule is to give them a second examination at the office. By putting them on a table and instructing them to breath slowly and deeply, if a slowing of the pulse is noted during expiration, we assume that the rate is due to the nervous control of the heart, the vagus action being stimulated here by respiration and the quickening of the heart being due to the accelerator nerve owing to the excitement. If on the other hand, after deep expirations, there is no change in the cardiac rate, it is probably due to some exocardial condition, a toxemia or a latent infection. Several of the applicants have shown this condition.

### Vaso Motor Control.

As evidence of defective control of the vaso motor apparatus, many of these applicants have cold hands and feet and give a history of having had chilblains, etc. Testing of the radial pulse, we find that the pulse is not sustained. In other words, although there is a beat at the wrist, the wave rises

(Continued on page 123)

# THE NEBRASKA STATE MEDICAL JOURNAL

Published monthly by The Nebraska State Medical Association.

Irving S. Cutter, Editor.....Omaha
A. F. Tyler, Associate Editor.....Omaha
J. M. Aikin, Business Manager.....Omaha
Room 468 Brandeis Building.

Publication Board.
F. A. Long, Chairman.....Madison
W. O. Bridges.....Omaha
B. F. Bailey.....Lincoln
J. M. Aikin, Ex-Officio.....Omaha

Subscription $2.00 Per Year. Single Copies 20c Each

Address all communications to J. M. Aikin Business Manager, 468 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. III. April, 1918. No. 4

The annual meeting of the Nebraska State Medical Society in Omaha, May 7 and 8, marks the semi-centennial of the founding of the society. Fifty years of medical growth for Nebraska and still growing. All honor to those leaders of a half century ago who builded better than they knew. We are proud of our Medical Society; of its accomplishments in the past and we glory in its future.

Every member should endeavor to be present at least one day of the 1918 session.

### Streptococcic Epidemic.

During the past few weeks Omaha has suffered from a widespread epidemic of streptococcic infections manifesting themselves as pneumonia, empyema, pleurisy with effusion, lung abscess, grip, cholemia and enteritis. The infection manifests itself by sudden onset with complete prostration, the patient feeling as though he were going to die. Under proper treatment, the worst of the attack passes over in forty-eight hours leaving the patient very weak and dizzy or being followed by an active pneumonia. These pneumonias run an atypical course being followed by the complications mentioned above.

This epidemic has swept through many commercial houses taking so many employees out as to cripple the business. One instance has been called to our attention where in one day fourteen of the fifteen employees were ill at home unable to work. In another instance three office girls were employed, two of them being incapacitated at the same time. It is our opinion that this condition is infectious passing from person to person by intimate contact. It may be water or food borne. An investigation to discover the carrier for this epidemic would be interesting.

### Physical Inspection of School Children.

On another page in this issue will be found an article describing the results of the first half year of physical inspection of the school children of Omaha. We hope that every physician in the state reads this article carefully and that every physician loans it to the influential and intelligent citizens of his community. There are only two cities in the state which have a system of school inspection, Lincoln and Omaha. Lincoln was the pioneer, Omaha having only instituted the system this year. The results as given in detail in the article elsewhere are too convincing to need discussion. The results in Omaha are practically the same as the results in Lincoln and are what we can reasonably consider would be the result in other cities throughout the state. May we express the hope that in the near future such a system of inspection of school children will be state wide. This inspection detects physical defects in their incipiency so that they can be corrected before irreparable damage has been done.

### Volunteer Medical Corps.

The National Council of Defense and the Medical Section of the Advisory Commission have completed plans for a volunteer corps to be composed of physicians who have passed the age limit of 55, or because of physical disability cannot qualify for the duties of army surgeons. The rules, application blanks for membership, and object of this volunteer corps have been prepared and are now in the hands of the governing boards of the several states. These boards of five physicians were appointed from the membership of the State Committee Medical Section of their respective states. The Nebraska Governing Board has for its membership:

M. L. Hildreth, Lyons.
W. O. Bridges, Omaha.
A. B. Anderson, Pawnee City.
W. J. Raynor, Cushing.
L. W. Bowman, Alliance.

This corps will respond to duty assigned by the Surgeon General of the Army, the Navy, the Public Health Service, or any other duly authorized department of service. This is an occasion for the profession to obtain federal support in the enforcement of sanitary laws for the prevention and spread of disease. It opens an avenue for the education of our legislators on medical questions giving physicians authority at least equal to that delegated to line officers in the regular army, for the enforcement of health laws.

Write to the member of our Governing Board who is most easily accessible to you for application blanks on which to indicate to him your special fitness for work in some one of the organized departments where service is needed in the interests of humanity.

John E. Summers.
Chairman Nebraska State Committee, Medical Section, Council of National Defense, 618 Brandeis Theatre Bldg., Omaha, Neb.

Joseph M. Aikin.
Secretary, 468 Brandeis Bldg., Omaha, Neb.

## Nebraska Medical Men and the Medical Reserve Corps.

The following statements are made by Dr. Franklin Martin, member of the Advisory Commission, Council of National Defense, in a letter March 29, 1918:

1. "When we refer to our chart of the Medical Officers' Reserve Corps, we find that Nebraska with a medical population of 1911, has 337 recommendations for commissions, making a percentage of 17.6, and placing her ninth on the list of states; and we are constrained to say that Nebraska does not need a reminder of any imperative duty. For your information, however, we will say that the needs for officers in the Reserve Corps is now very urgent. Many more men are being called to active service than are being admitted to the corps. In a very short while, if this keeps up, the corps will be depleted. We will, therefore, appreciate it greatly if either you yourself, or some one of your appointment, will tell the doctors present at your meeting of the state medical association, of the needs of the Medical Reserve Corps.

2. "We have received very many assurances from members of our State Committees, that Senators and Congressmen are much impressed with the importance of officers of the Reserve Corps receiving higher rank. We are also receiving letters from officers of the Reserve Corps on duty, citing some embarrassing situations when brought in contact with medical officers of other armies doing the same important work that they are doing in the United States Army.

3. "Any assistance or information which we may give you at any time will be gladly rendered."

This concise, yet comprehensive statement from an authoritative source, merits thoughtful attention and action by our medical men.

## Physical Examination of Applicants for the Aviation Service, U. S. A.

(Continued from page 120)

rapidly and also falls rapidly, varying from the normal pulse curve. By raising the arm, this collapse can be more readily demonstrated. Another test is to take the pulse with the arm hanging. We find that the volume of the pulse is high, but the tonicity drops slightly more rapidly than the normal pulse. By raising the arm to a horizontal position, the volume is lessened and the drop of the pulse wave shows more markedly its loss of tonicity and when the arm is held in a vertical position, both of these factors are brought out more strongly. The importance of going into the vaso motor control in these applicants for the aviation service is first because of the absence of this low vaso motor tone in the best type of candidate and the presence of this condition in flying men who have broken down under the strain. We have seen about eight cases of this condition—one of them is still under observation and combines arrythmia, tachycardia and low tone. Another has the tachycardia, low tone and hemic murmur.

### Blood Pressure.

According to the statistics of life insurance companies, the blood pressure for men from 19 to 24 should be from 118 to 123 mm.; from 25 to 34 it should be from 125 to 127 mm. As most of our applicants come within these ages, the maximum blood pressure should be 128, or less. Of the series that we have taken, the blood pressure has been systolic 120.2; diastolic 62.8; and pulse pressure 57.4. We have had eight applicants with blood pressure of over 140. These have been rejected, but we have had several with blood pressures over 140 that on second examination show a normal blood pressure. A good example was that of an applicant in excellent physical condition whose blood pressure at the time of the examination was 155. The next morning when seen at the office in a quiet room his blood pressure was 115. The rule has been made at this unit that any of these applicants showing a blood pressure over 140 are rejected, for it is well known that the statistics of insurance companies will show that about 75% of these individuals show some cardio-vascular derangement in their later life.

### Nervous System.

In the examination of the nervous system, the eye reflexes, the knee jerk, the Romberg test are all taken. A history of tremor and paresthesia are gone into. The applicants are required to walk across the room and back with their eyes closed to give some idea of their coordination and muscle sense. Gross organic disease in these applicants is extremely rare. Stammering is considered evidence of a nervous weakness and a history of this is inquired into. It is considered by the board sufficient cause for rejection, for it is well known that men who have stammered as children will often, under the severe nervous strain that an aviator is exposed to, begin stammering again. It is impossible to judge of a man's nervous condition in the short time we have to examine him, but the instructions from the aviation board to the commanding officers at the flying schools are to watch these men under actual flying conditions, for there is no branch of the service that will break a finely balanced nervous system more quickly than the aviation service.

### Urinary Tract.

A complete examination of the urine is made in all cases. We have found one applicant with a rather severe diabetes for with evidences of parenchymatous nephritis and about three per cent of the men that we have examined show an albuminuria. It is well known that albumin due to the presence of serum or nucleo-albumen is very common in young men and is not necessarily associated with organic diseases of the kidneys. Inasmuch as the amount of albumen lost is small, it is not unless associated with vaso motor instability considered cause for rejection.

### Abdominal Organs.

Organic disease of the abdominal organs is inquired into, although it is rare for any applicant to admit having had any disease. An examination is made by palpation and percussion and the tone of the anterior abdominal muscles is particularly examined, for it is well known that a weak tone of these muscles is a factor in producing splanchnic flooding and fainting, and a good tone is necessary for the functions of respiration, circulation and digestion.

### Conclusion.

As a whole the physical examination resolves itself into a general consideration of the functional activity and soundness of the cardio-vascular, nervous and respiratory system. A candidate with evidence of a deficient circulation is considered to have a poor cardio-vascular tone; one with tremulous hands, unsteady in balancing and over-active deep reflexes is regarded as having a nervous system of poor tone. When all of the factors are taken into consideration, the men are recommended by those in charge, depending upon their physical examination. The first class men are put on duty as pilots, and those who fall short of this as observers. The others are rejected and advised to enter some other branch of the service.

---

## Prophylaxis.*

### With Special Reference to Protein Metabolism.

J. Lue Sutherland, M. D., Grand Island.

The subject chosen is limitless. While the prevention of disease, the conservation of health and the prolongation of life are duties of every good citizen, the initiative of any real, altruistic work along these lines necessarily falls upon the medical profession in general, and medical men in particular.

An account of the very broadness of the subject together with the countless number of angles from which any single department of it may be viewed, in order to avoid undue length of a paper I must necessarily confine my discussion to only two or three features, of which the nitrogenous element in food metabolism and the important part it plays both as a builder and destroyer of the human body, constitutes the main part, though not quite all of that which I am about to offer for your consideration.

While great advancement has been made in recent years in both the study of pathology and improved methods of diagnosis, and which may be justly characterized as epoch making in their important significance to pathologic humanity, it must be conceded by all that prophylaxis has a still greater significance for the simple reason that its function is to preserve and maintain the organism in its pristine anatomical and physiological perfection, as near as the word perfection can be applied to mortal man.

---

*Read before Hall County Medical Society, January, 1917.

To one who took his medical degree over a third of a century ago, retrospect to that now remote period might be interesting, were it not so gallingly humiliating. Then, as we all know, medical teaching consisted in the main of dry, didactic lectures upon all subjects, the students either relying upon their memories or taking notes on as much as they could catch, and trusting to absorption from the atmosphere of the lecture-room for the rest. We were required to spend a few hours each week in the chemical laboratory under the tutelage of a "sup" who was often more conspicuous for his absence than for his presence, while the nightly orgies in the anatomical room under the sky-light savored more of the perfunctory than any real zeal in the work upon the cadaver. We were taught that uric acid in the blood was the cause of rheumatism, but just how it got there or how its formation could be circumvented was not made at all clear; but that cimicifuga-racemosa and the salycilates internally and a dozen or so liniments externally, and I might add eternally, were sovereign remedies for its cure. Temperature was an entity that was to be combatted with aconite regardless of the cause. Appendicitis was not yet born, but the numerous cases of "inflammation of the bowels" were treated assiduously by the application of turpentine stupes and the administration of opiates in heroic doses. The cause of puerperal sepsis was not sought to any great extent, but it was generally conceded that any practitioner losing a case from this disease, not necessarily infection, should not attend any more confinements until after the lapse of three weeks. And while it was not strictly mandatory that in the interval he should take a bath or change his clothes, it was recommended that he submit to the ordeal of a hair-cut. Caesarian section was advocated for cases of deformed pelves only, and not then until after all other known means of delivery had been tried without avail; and the Smellie scissors were considered a very necessary requisite in every obstetric outfit. Theraputics was the great desideratum of the great majority of both teachers and students; what drugs and how much should be poured down throats to cure diseased bodies was listened to with greater attention than would have been the most elaborate discourse upon any subject in the field of pathology; while biochemistry, dietetics and individual hygeine were practically ignored. And were it not that this propensity to rush to an attempt at the cure of disease, however vague the diagnosis and however misty the modus operandi of the drugs employed is still with us to an uncomfortable and humiliating degree, there might be but little excuse for this criticism in a paper of the present day; but the question "What's the treatment" which we have so frequently heard in our medical meetings is evidence that it is still here.

Getting back to the present, vital statistics and mortality tables indicate that longevity has increased within the last few decades, and the question naturally arises, to what is this due, and what is its significance medically considered? Does it mean that we of the present generation have at our command more and better drugs than did our predecessors, and that our knowledge of theraputics is superior to theirs and that these two acquisitions furnish the main explanation?

As I have already said, the maintenance of health by the prevention of disease is of much more value to the human family than any means that can be employed in efforts to restore health subsequent to disease invasion. I claim that this statement is equally axiomatic as is that old adage, "he who saves a limb does better than he who cuts it off." And I will say further, that the prevention of disease is far more difficult and much less remunerative to the practitioner than is the ordinary routine "doctoring" even at this enlightened day, for several reasons, one of which is incompetence upon the part of the medical profession as a whole to properly advise in matters of diet and correct living, coupled with the traditional preference to deal with disease rather than health. Another reason is ignorance upon the part of the lay public together with their unwillingness to pay for being taught the principles of health maintenance, hence the prevention of disease, together with an almost insane willingness to part with their money to anyone who can make the most extravagant promises to "cure," however vague, and however apparent the impossibility of fulfillment. No rational individual would consider for a moment the bid of a would-be carpenter to construct a fine dwelling, whose knowledge of the art was acquired in a study of less than half a year, however well he could saw a board or drive a nail, and yet many an otherwise intelligent layman is perfectly willing to entrust the very issues of life and death into the hands of practitioners whose knowledge and training are inferior to that of the professed contractor when one takes into consideration the difference in their respective requirements and responsibilities.

What is more absurd or incongruous, or we may say, criminal, than for one to offer his services for the correction of the abnormal and pathological, when his knowledge of the normal and physiological if not absolutely lacking, is crude and imperfect to the extreme degree? He who calling himself a physician goes from house to house leaving powders, pills and bottles galore in his wake is not only a menace to all who trust themselves to his empiricism, but is an absolute clog to all medical progress within his influence, and yet in the present stage of lay enlightenment this is the kind of service, in the main, which is in greatest demand, and for which, most willingly paid, hence the great difficulty which confronts the true physician when he attempts to instruct the little world in which he moves, in the principles of prophylaxis, rather than to pour down its throat a small drug store promising that it will go right to the diseased spot and perform—the impossible. But however discouraging this attitude of the laity and the disposition of all-too-many practitioners to pander to it, the field of prophylaxis, from whatever angle surveyed, has its attractions for all true students of medicine.

The average duration of life is less than 40 years; some mortality tables placing it at 33 years. One fourth of all children die before the age of 6, one-half before the age of 16 and only one in every hundred attains the age of 65. Why should 25% of all children die before the age of 6 years? There may be more answers to this question, but here are two: physical handicap to the child on account of physical unfitness of one or both parents, and trauma at the time of birth on account of inefficiency upon the part of the obstetrician. Without going into this phase of infant mortality in detail, I wish to say that right here is a most fertile field for prophylaxis. All too many are doing obstetric work today whose knowledge of the principals involved in the mechanism of labor is so meager that they have but little appreciation of the responsibilities they assume when offering their services in giving to the world a new human being. Their chief concern being to have the mother and child living at the completion of the labor, and often not so solicitous for the child, and at the minimum expense of time, and trusting to "luck" as to the pathologic sequellae to both.

DeLee (1) says "20,000 women die annually during childbirth, and that the mortality of the newborn children is also noteworthily high, although it is impossible to show by statistics how many children die every year from the immediate and remote effects of childbirth." I am willing to plead guilty to inefficiency in this field in my earlier days. On more than one occasion have I heard the sorrowful wail of the new mother, "all these months of patient waiting and the hours of pain and suffering for nothing," when after a long and tedious labor I had nothing to offer her but the body of her dead infant which at the beginning of labor was alive and well. Nor did the calling to my mind that prior to graduation I had had no bedside training in obstetric technique afford me much consolation. And there is still room for improvement.

Notwithstanding the fact that longevity has increased within the last few decades, as instanced, that in 1900 the death rate per thousand was 17, in 1911 it was only 14.2, does it not strongly appeal to us all that even these figures could be materially improved? Is it wholly unavoidable that only one person in every hundred attains the age of 65 years? Great advancement has been made in recent years in the way of preventing acute diseases such as typhoid, yellow and malarial fevers, cholera, bubonic plague, smallpox, etc. But what about such diseases, or better perhaps to call them conditions, arteriosclerosis, angina pectoris, goiter, nephritis, diabetes, and that blanket misnomer, "heart disease," which should be called charity for it "covers a multitude of sins." In a way all of these diseases are corelated, arise from similar causes, exist under pretty much the same conditions, and as a rule terminate in premature death. In our own state, imperfect as is our system of compiling vital statistics, in the six months from December, 1914, to June, 1915, there were 1396 deaths from the class of diseases just mentioned; a rather high figure is it not for a population of less than two millions, and the question naturally arises whether all this mortality with its attendant morbidity is unavoidable, and if so what is the course to be pursued? In a word, faulty metabolism of foods is a most prolific cause. Proteins too often and too much. And I here make the assertion that if just this one class of foods could be properly regulated both as to the kind and amount, and taken at the proper intervals, that no only would the death rate from these diseases be lowered and lives prolonged, but invalidism would be greatly diminished both in quantity and degree and life be made worth the living to a numerous class of individuals whose lives are now suddenly snuffed out between the ages of 40 and 65 years.

Ordinarily when disease prevention is referred to, either spoken or written, acute diseases are meant, and the principal preventive is along the line of sanitation, while the prevention of the diseases just mentioned, along the line of individual sanity has not received the attention its importance would seem to demand when we take into consideration not only the mortality, but the suffering and invalidism and even the financial loss to the state which these diseases entail. Faulty metabolism of foods in general, and of nitrogenous foods in particular, and most frequently from overindulgence, while not wholly responsible for these conditions is a most prolific cause which, if it could be corrected, longevity would not only be increased, but the years thus saved to the individuals would be the most productive and enjoyable years of their lives; an economic gain both to them and to the state. This, need I tell you, can be accomplished only by a thorough and comprehensive knowledge of the underlying principles of metabolism, together with a perfect appreciation of the necessity of their strict observance by everybody who eats. Everyone before he is 16 years old should have a general knowledge of the relative proportions and amounts of proteids, fats and carbohydrates appropriate to age, sex, occupation, season and environment.

It should be thoroughly known and its significance appreciated that the taking of food into the system has something more for its object than to appease hunger or tickle the palate. That eating simply to live is but little more rational, though perhaps less harmful, than living to eat. However well understood by medical men that the growing child requires not only a relatively greater amount of proteids than does the adult, but that for the best results the proteids must be of the proper kind, the masses of the laity do not know this and in consequence believe that children can thrive on the same kind of food, though less in quantity, as that eaten with relish by the adult; and when children rebel and refuse to eat certain articles, or to eat them under protest and in such meager quantities that nutrition suffers, the ignorant parent or guardian attribute it to whim or perverted appetite, and by compelling them to either eat that which is set before them or go without until hunger effects surrender, the results are that positive harm is done to those children; resistance to disease is lowered, growth and development retarded and physiological function crippled.

To illustrate more specifically just what takes place, and what is lacking here, let us call to our aid a little biochemistry. Recent investigations by numerous workers in the field of metabolism demonstrate the absolute necessity of the amino acids in the metabolism of proteids, and since all proteins do not contain all the amino acids, resort must be had to proteins differing in variety in order to secure harmonious combinations; and the general conclusions of such observers as Folin and Denis, van Slyke, Meyer, Abel, Rountree, Turner, Kaplan, McClelland, Ellis, Chipman, Vaughan, Meara and others are that all digested proteins of foods are absorbed as amino acids. It stands to reason therefore that in order that no tissues of the body suffer on account of either a lack or an excess of this ultimate product of all foods, there must be a reasonable harmony between the quantity of proteins ingested, and the quality and kind, and, as before stated, suited to the various activities of the body, environment, etc. An adult may be sustained in nitrogenous equilibrium by means of proteins that do not contain all the amino acids, whereas a growing individual would not be so sustained. For example (2) "Mendel and Osborn have shown by means of experiments on albino rats, that the casein of milk, edestin of hemp seed and the albumen of the white of an egg are capable of satisfying the needs of the body at all stages of development. Analysis of these proteids show the presence of all the amino acids." These conclusions therefore, cannot but impress upon our minds that before we are competent to become teachers of the laity in this important matter of diet in its application to both health and disease, we should have not only a general knowledge of the subject, but to a certain extent a technical knowledge also, for there are some things that the laity now know which are not true and will have to be unlearned before a correct knowledge can make much progress. One of these fallacies is the almost universal belief that milk is a suitable article of diet at all times and in all circumstances in which food can be taken. It has been demonstrated (2) "that milk is positively harmful in all cases of arterial hypertension for the reason that casein is its main proteid and in splitting yields 7% tyrosine, which under putrefaction yields tryamin which will cause a decided rise in blood pressure." Another popular fallacy is the great food-value that is attributed to corn products. "The principal protein of corn is zein which contains neither lysin, tryptophan nor glycocol and is therefore wholly inadequate to supply the protein needs of the individual, neither growing or adult except in combination with other proteids which yield the other essential amino acids to maintain both normal growth and body weight." When such food is given, nature's craving not being appeased, quantity is substituted for quality and putrefactive splittings is the result which are toxic and harmful both in a positive and negative sense; positive in the extra tax put upon the eliminative organs, and negative in the lack of nutrition. While on the other horn of the dilemma foods too rich in proteins, or in excess to the fats and carbohydrates which are in combination, need very careful regulation as to the amount or positive harm will result to the organism, of which heavy steaks, rich roasts, mince pie, embalmed ham, sausages and even the delectable oyster when taken in excess are pernicious examples. But some one might interpose the query right here, "how is even a practical working knowledge to be acquired by the lay public as to the proper amount, kind and quality of proteids to meet the normal needs of the body" and the question would be well taken. However I think it may be safely claimed that the normal appetite when not dominated too much by the gustatory sense is a safe regulator both as to the kind and quantity of food the system requires for the growing individual, though it may not always be a safe guide for the adult after the age of 35 or 40 especially those whose circumstances have permitted them free indulgence in "the good things of the table," and it is right here where the functions of medical men may be brought to bear with telling effect in educating this class of their clientelle in the matter of diet. The two main points of difference to be always kept in mind is, that in youth it is the lack of the proper proteids, while in later life it is the excess that is to be guarded against.

Another fallacy is that physical exercise, except in the extremely aged of course, is absolutely essential for the promotion and maintenance of health. Exercise regardless of the degree, means the expenditure of both heat and energy, and the resultant increased cell metabolism, which in turn demands increased intake of food, which in turn imposes increased tax upon both the digestive and eliminative organs, and when we consider the probable condition of these organs at this period of life, the effect of any additional tax upon them must be apparent to all.

While it may be true that death does sometimes occur from acute indigestion, the more nearly correct diagnosis would be chronic protein poisoning, the eliminative organs having become so weak and crippled from repeated excesses veritable insults to normal function, until finally one overindulgence, however small, proved to be the proverbial straw which the camel's back could no longer sustain.

In conclusion then, in our study of disease prevention, it must be evident to all that a thorough knowledge of dietetics in general, and of nitrogenous metabolism in particular is most essential, and in our daily rounds we should impress upon our patrons the absolute necessity of proper foods and right living, in health and disease from the cradle to the grave.

Jour. A. M. A., Oct. 14, 1916.
Jour. A. M. A., Nov. 25, 1916.
Meara, Treatment of Acute Infectious Diseases.
Nebraska State Medical Journal, October, 1916.

### Military Anti-Tuberculosis Program Perfected.

Plans for a complete program for the Prevention of Tuberculosis in the army have been perfected by the National Association for the Study and Prevention of Tuberculosis working in cooperation with the Surgeon General, the Y. M. C. A., and other agencies. This, it is predicted, will put the impending second draft on a better health basis than the first. The program will include not only a follow-up for every man discharged on account of tuberculosis, but a thorough-going health educational campaign among the soldiers.

Prior to the first draft the National Association began to outline a preventive campaign. Owing to the magnitude of the task and the many practical delays in perfecting and applying the details of this scheme, the results were not as encouraging as might be expected. This was due to the fact that the report of names of men rejected by the draft on account of tuberculosis was inadequate, the slowness of the machinery in getting under way, and the many difficulties in determining the status of the men.

Inasmuch as these enlisted or drafted men do not become accepted soldiers until after their probationary period lasting from three to six months in the various services, the Government assumes no responsibility for the after-care of those whose health breaks down during that period. Hence, this problem belongs to the civilian boards of health and the unofficial health organizations.

The National Association program falls into two main divisions: (a) follow-up work and (b) educational work. The first obstacle to the follow-up program was Section Eleven of the Selective Service Regulations regarding the second draft which forbids giving a record of a man's condition to anyone except certain designated officials. The National Association officers, however, placed before the War Department the importance of this work and were influential in persuading them to open the records of rejected men to state and local boards of health throughout the country, through the United States Public Health Service and the Council of National Defense.

Inasmuch as the above section of the regulations does not apply to men dismissed from training camps after they have passed draft boards, the Association arranged with the Surgeon General and the division surgeons in camps to receive the names of all men thus dismissed. These lists are divided up by states and forwarded to state associations and state boards of health for follow-up work. Where men are referred to localities where there are not at present facilities for this follow-up work, the association will use its good offices to promote the establishing of such facilities.

In the meantime, the Medical Department of the Army has perfected its machinery for weeding out these tuberculosis cases. Every man passed by the draft board after going into camp is examined by the Regimental Surgeon, re-examined by a tuberculosis board and then if suspected of tuberculosis, again examined by a tuberculosis expert. This follows a general policy mapped out and recommended by the National Association.

A large number of men have already been accepted into the service who were known to be tuberculous, many of them formerly inmates of tuberculosis sanateria. Part of the Association's work has been to get in touch with every tuberculosis sanatorium and dispensary in the country and compile lists of all recent male inmates of draft age, giving the history of their cases and whether or not it was known if they were in the army at present. Hundreds of such names have already been received. This data is forwarded to the training camps, the men are located and the results are reported back to the sources of information.

Furthermore, the Association has sent a letter to all of its fifteen hundred local cooperating agencies giving the provisions of the second draft and urging that these agencies procure the names and addresses of all the men of military age in their section who are known to have tuberculosis; get in touch with these men and arm them with the necessary affidavits to prevent, if possible, their being passed by the draft board, and recommend to the local draft boards the names of the approved tuberculosis experts in their section.

The Association is also cooperating with the Surgeon General's office to aid the government in providing sanatoria for those men who have been discharged from the service on account of tuberculosis after their probationary period has expired. All full-fledged soldiers and sailors returned from France or other stations will be cared for as near to their own homes as possible in sanatoria accommodations provided by the government. The government intends to utilize as far as possible existing institutions.

From the United States Marine Corps the National Association has secured each month a report of men rejected for tuberculosis from all its recruiting stations, and these men will receive the regular follow-up attention. From the second or educational division of the program it is hoped to derive the greater ultimate good by the establishment of fundamental preventive measures among the well.

The National Association is interested in any kind of an educational campaign among the men in the various military camps that will tend to promote interest and information with regard to the control and prevention of communicable diseases, and toward the promotion of public and individual health in general. In the mobilization of such large numbers of men in various camps throughout the United States there have developed an unusual number of somewhat serious epidemics of colds, coughs, pneumonia, measles and various other respiratory and communicable diseases. That all of these diseases can be controlled by education and by the exercise of adequate public health measures has been clearly demonstrated in the civilian population throughout the United States. Most of these epidemics are spread through ignorance and carelessness. It is inevitable where large numbers of men from all walks of life and with all possible diseases and variations of physical habits are thrown together in somewhat uncomfortable and crowded living conditions, that there will be an immediate increase in the amount of sickness from communicable diseases. It must be obvious, however, to even the most superficial observer, that if these men can be taught to maintain a reasonable standard of personal hygiene and can be given a knowledge of the methods and principles of the control of communicable diseases a rapid diminution in the sickness rate will follow.

In co-operation with the Educational Committee of the National War Work Council of the Y. M. C. A., the National Association will furnish a number of stock lectures dealing with tuberculosis together with lantern slides to illustrate them. It will also arrange to put the educational secretaries of each of the camps in touch with public lecturers in and around their respective camps. The Association has requested the War Department to give careful consideration to the desirability of appointing one or more special officers detailed to lecture on tuberculosis and allied health subjects in all of the army camps throughout the country.

The Association has prepared a special circular entitled, "Red Blood," giving in brief and attractive form a message to the soldier relative to personal fitness, a health "Don't Card;" and a public health manual may also be distributed, the latter being a text book of personal hygiene. The Association will also arrange to distribute through the departmental executives of the Y. M. C. A. a number of special tuberculosis exhibits known popularly as "The Parcel Post Exhibit." In connection with these moving picture films and lantern slides will be used. The National Association Field Secretary, Dr. Pattison, is visiting the training camps and supervising this educational work.

## Smallpox*

R. W. Fouts, M. D., Dawson.

In presenting a paper upon smallpox it will not be my purpose to go into its history, nor to discuss its etiology, a subject which is still a matter of speculation among scientists, but rather to present briefly the points which have aided me in diagnosing it from other eruptions with which it may be easily conconfused and to discuss the protective value of vaccinations as has recently been observed in an epidemic of about 50 cases with which I have had to deal since the first of this year, supplemented by a few comments upon the present quarantine laws of the state.

Smallpox—the name which strikes terror to the heart of the average layman, is not the smallpox of a half century ago, when it exacted a death toll in practically every family invaded. Now it is in most cases a systemic affection wherein the patient experiences a train of symptoms usually thought to be the "grippe" lasting three or four days, after which he begins to feel as well as usual, to be followed a week later by a few pimples varying in number from ten or twelve to a few hundred which in the milder cases fail to attract his attention until they begin to itch. After the prodrome, and by this I mean the first three or four days, the individual usually feels well enough to go to work and unless the eruption is unusually severe, experiences very little inconvenience except for the itching and the quarantine. This is the view taken by the experienced laymen of today of the average case of smallpox and from the standpoint of a physician observing these cases I am inclined to agree.

---

*Read before the Richardson County Medical Society, April 4, 1918.

The period of incubation is regarded as being from ten to fourteen days. This variation I believe is due chiefly to the stage of the disease to which the prospective case is exposed. All authors reviewed state that the disease is contagious during the prodromal stage and some as being transmissable during the last days of incubation. I have seen no cases where the individual was exposed day after day as in members of the same family develop smallpox under eighteen days and nearly all go twenty-one days or more from the date of the initial symptoms of the original case. I have seen a few-five cases—the time of exposure which was definitely known and they developed—two in ten; two in eleven and one in twelve days. These latter cases were exposed after the eruption was fairly well developed. Those of the longer period of incubation, began to count the days with the initial symptoms of the original case for that particular family or set of cases. I have also seen many individuals exposed during the pre-eruptive stage and while some were vaccinated and some were not, no cases traceable to the sort of exposure, developed the disease. We are therefore led to conclude that smallpox is contagious only after the eruption appears, and dating from this time its period of incubation is certainly less than two weeks.

The symptoms of smallpox are of very sudden onset, only a few hours elapsing from the first notice until the patient is very much indisposed. Tired feeling, light chills, limbs aching, light headache and backache, soon becoming quite severe, a little sore throat and all the symptoms of a beginning lagrippe or tonsilitis, only the fever is slower in appearing in smallpox. There is a loss of appetite but seldom much gastric disturbance. After twenty-four hours the symptoms are about the same only more severe. The absence of much sore throat or maybe none will decide against tonsilitis, but in the absence of an epidemic or a history of exposure one is apt to regard the case as being lagrippe. Another twenty-four hours may elapse and all efforts at relieving seem to still have failed and the patient is quite sick. However, during the next twenty-four hours the patient seems to undergo a decided change for the better. Very little temperature and practically no aches or pains and one might not call on patient again, but if you happen to have become suspicious you will call next day and may be able by this time to distinguish beneath the skin somewhere on the body, usually the face, chest, back or arms a few small red macules not larger than a pencil point and maybe less than a dozen in number. They disappear on pressure, but immediately reappear. If they are but few, place a ring around them with pencil, isolate the patient and call again next day. Upon this subsequent visit you will probably find that your macules have become slightly larger and now have a decided shot like feel under the skin and color does not disappear so readily. There may be some new ones. This should be sufficient to make a diagnosis, but if still in doubt, with your patient isolated and a temporary quarantine you are safe in waiting another day before establishing an extended quarantine and taking the chance of later being subjected to the embarrassment of admitting a mistaken diagnosis.

Upon your next visit you will find the eruption becoming decidedly papular on the upper part of the body while on the lower limbs they have been in an earlier stage. With this rather slow, yet progressive development we feel safe in announcing smallpox and may confidently expect our papules to become vesicles and in due time fully developed postules. The length of time from the macule to the postule fully developed is about seven or eight days. With a typical case of this sort the diagnosis should not be difficult but occasionally one is confronted with an eruption and finds it more difficult to say that it is not, than to say that it is. Such was my experience when confronted with a few cases of chickenpox toward the close of our recent epidemic. I have also pondered over cases of acne lesions, before pronouncing it was not smallpox. This may at first sound rather stupid, but with one case in particular that gave a history of slight prodromal symptoms the week before, it was not easy. Of course, one would recognize the acne lesions. The only question was whether or not they were all acne pustules.

While an acne pustule in full bloom does not resemble a typical smallpox pustule, yet all smallpox pustules are not true to text book description, especially if the individual has attempted to relieve the itching in the customary manner. A fully developed smallpox pustule is dome shaped with a slightly depressed center and is surrounded by but silghtly reddened base and is not particularly tender or painful on pressure. When opened it leaves a ragged necrotic base extending to the extreme edge of the pustule. An acne pustule is more cone shaped, has a larger reddened indurated base, is tender and painful on pressure and when opened and pus evacuated, it leaves a crater like opening in center that does not extend to a ragged edge.

The eruption of chickenpox probably resembles smallpox more than any other.

Here the history of the case is of supreme value. Usually the eruption is the first thing noticed. Attention being attracted to this by the itching. The lesions are quite similar—the main difference that varicella vericles seldom if ever become pustules, and are completely formed and scabbing before smallpox would have come to the vesicular stage. The vesicle of smallpox is lobulated and this I believe serves to give it the ragged edged appearance which is not true with chickenpox. Also in varicella the lesions appear in successive crops and are surrounded by a more reddened base.

At the beginning of the macular stage variola might be confused with measles, the prodromal periods of which are almost the same length. However, the marked bronchitis, the reddened watery eyes, marked coryza and suffused expression accompanying measles is usually lacking with smallpox, and at the time of the eruption when the temperature is highest in measles it is practically gone in smallpox.

I have said that I regard smallpox as being mildly contagious as compared with some of the other exanthemata and in support of this I wish to cite the following: The original case for this particular epidemic was a man thirty-two years old coming from a family of three other brothers, three sisters, father and mother. None but the mother had had a previous vaccination. Two of the brothers ate and slept at home all the time with the case. The other brother and three sisters only occasionally. The source of this original case is undetermined. After three or four days this particular case went about the community as usual. Later, the two brothers at home were sick for two or three days and went about as usual, one attending school with about twenty-seven other pupils from fourteen different families. From this exposure, smallpox developed in but three of these families. A fourth case being the teacher who was kind enough to "squeeze out" some of the pimples on the boy's face. These two cases were in the eruption stage a few days before and during holiday week, during which time one attended the Catholic church with its usual holiday services and the older brother attended three public dances, at two different places, participating each time. The teacher after about ten or twelve days came down during the night of December 28th, and was in bed the greater part of two days with the usual prodromal symptoms; at this time he was in Lincoln, returning December 31st and attending a festival service given New Years night at the Protestant church, where he participated in the choir music and mingled with the crowd, later going to a home for nearly two hours where five others were exposed. It was at this time the beginning eruption was noticed. After exposures of this sort, in both churches, at three public dances, and from cases having passed through their entire eruption stage without being restricted in any manner as to movements throughout the community, if it is so violently contagious, one would expect a wide spread epidemic. So far as could be determined only two cases developed from exposure at any of these places. Of course, several were vaccinated, but the large majority were not.

As to the protective value of vaccination, we may say that a good "take" of recent origin will protect in practically 100% of the cases, and in this connection I wish to submit a chart prepared to prove the fact.

| Family | No. in Family | Orig. Cases | Previous Vaccination | Vaccin. After Exposure | Successful Vaccination | No takes or Not Vac. | Subsequent Cases |
|---|---|---|---|---|---|---|---|
| 1 | 7 | 2 | 1 | 4 | 1 | 3 | 3 |
| 2 | 5 | 1 | 1 | 3 | 1 | 2 | 2 |
| 3 | 6 | 1 | 1 | 0 | 0 | 4 | 4 |
| 4 | 5 | 1 | 1 | 3 | 1 | 2 | 2 |
| 5 | 3 | 1 | 0 | 1 | 1 | 1 | 1 |
| 6 | 4 | 1 | 0 | 0 | 0 | 3 | 3 |
| 7 | 5 | 1 | 1 | 1 | 2 | 2 | 2 |
| 8 | 8 | 1 | 1 | 5 | 5 | 1 | 1 |
| 9 | 11 | 2 | 0 | 9 | 6 | 3 | 3 |
| 10 | 4 | 0 | 0 | 3 | 3 | 1 | 1 |
| 11 | 3 | 1 | 1 | 1 | 2 | 0 | 0 |
| 12 | 4 | 1 | 0 | 0 | 0 | 3 | 3 |
| 13 | 5 | 1 | 1 | 4 | 2 | 2 | 2 |
| 14 | 2 | 1 | 1 | 0 | 1 | 0 | 0 |
| 15 | 3 | 1 | 3 | 3 | 3 | 0 | 1 |

The kind of vaccine used was mostly glycerinated virus put up in capillary tubes. A few P. D. & Co. ivory points were used in the beginning with varying success, and on the whole unsatisfactory.

With the capillary tubes the takes were about 90%. The method of scarification employed was also varied. The single scratch, or two scratches with the needle, applying the vaccine to the arm either before or after the scratch; puncturing the epidermis through the applied vaccine in six or eight places, and completed denudation of epidermis either with needle or scalpel. This latter method seems to ensure the quickest take, but it also usually gives the patient a pretty sore arm. Also the constitutional symptoms are more marked with this method. With some a dressing was applied, with others it was not. In over 150 cases no serious complications resulted from vaccination.

By comparing the last two columns of the chart it will readily be seen that in my experience smallpox is preventable in practically 100% of cases, and if not prevented it is far from the greatest calamity that might befall one from a contagious disease standpoint. I speak advisedly on this subject from personal intimate experience with the disease.

The board of health rules and regulations provide for a strict quarantine for this disease. These laws were probably formulated some fifty years ago when to contract smallpox usually meant death or disfigurement for life.

Immediately upon report of smallpox in this locality, in accordance with these laws there proceeded from the State Department of Health office, instructions regarding the control of same. It directed that all cases including family be quarantined for at least three weeks and longer if necessary, and that proper fumigation follow. This was not so bad, but it also directed quarantine for two weeks of all contact cases. By contact case we mean an individual coming in contact with a case or having been exposed. I estimated that I might have anywhere from two to five hundred contact cases, but realizing there might be some dfficulty in enforcing a quarantine over the entire town and community, no quarantine for this class of cases was established, but families with cases were quarantined for varying lengths of time. Men were taken away from their business and children out of school. Valuable time was lost by some, particularly by some of the school children who failed to pass their examinations on account of the loss of time and required another year to complete their school course. While a year in the grades would seem to mean but little, yet a year at the close of high school course means much, and taken over our entire state would undoubtedly mean many years.

To me this antiquated method of dealing with smallpox of today is wrong and from an economic standpoint a failure. Without question the smallpox of a half century ago required such drastic measures for its control, but its present day manifestations does not justify such procedure.

Smallpox is a preventable disease, if the individual cares enough about the protection to be vaccinated. Therefore, why not deal with it as we deal with chickenpox and measles. Isolate the patient or quarantine him to the premises, placard the house, vaccinate the remaining members of the family and turn them loose. Compel the other fellow to vaccinate for his own protection rather than placing all the burden on the one who happens to have a case in the family. And while the remaining members of the family have been vaccinated and did their part to eradicate the disease they are compelled to suffer the inconvenience of a needless quarantine. I believe if a method of this kind was inaugurated all of our people would become vaccinated voluntarily and smallpox within a very short time would be preferred to either measles or mumps and epidemics would cease to exist.

---

## NOTES.

The May bulletin recently received from the Cooperative Medical Advertising Bureau of the A. M. A., contains the following:

"The Nebraska State Medical Journal took occasion, very opportunely, to review two books on Roentgenology in its February issue, devoted particularly to 'Electricity and Radium.' The appropriateness of the reviews to the special issue were, of course, appreciated by the readers, publishers and the advertisers."

The monthly report of the Bureau of Markets, Department of Agriculture, shows storage holdings of fish on March 15, 1918, as follows:

The 187 storages that reported showed total stocks of 36,325,572 pounds of frozen fish, cured herring, and mild-cured salmon. The 157 storages that reported for March 15 of this year and last show present holdings of 26,977,044 pounds, as compared with 22,102,342 pounds last year, an increase of 4,874,702 pounds or 22.1 per cent. The 181 storages that reported for both February 15 and March 15, 1918, showed a decrease of 7,469,296 pounds, or 17.3 percent, while the 148 storages reporting their holdings for both February 15 and March 15 last year showed a decrease of 5,570,500 pounds or 24 per cent. (From Official Bulletin, March 26, Washington, D. C.)

Our Secretary of the State Council, Captain Ira H. Dillon, is chief of the section of Surgery in Base Hospital, Camp Bowie, Texas. During November and December, 1917, they had 1700 to 2000 patients all the time. In the six months ending March, 1918, the mastoidectomies numbered between 90 and 100.

Delegates and all members of the House of Delegates are urged to meet Monday, May 6th, 1918, at 7 p. m. in the Fontenelle Hotel, for organization and the transaction of such business as may properly be considered at that time. Delegates should bring their credential cards. Six of our Council are absent doing Government service. If they cannot be present, their places must be filled by members ad interim.

President Mullins earnestly desires a large delegate attendance for wise decisions on all questions considered.

The phenomenal growth of medical activities forced upon us by war conditions, demands our prompt, thoughtful and business management of State Association affairs. Come prepared to give constructive assistance on the proposed constitutional amendment and any by-law changes that our best knowledge and wisdom may suggest.

The Richardson County Medical Society met in Falls City, April 4, 1918, with the following program:

"Fractures," Dr. A. F. Tyler, Omaha.

"Smallpox," Dr. F. W. Fouts, Dawson.

Clinical case reports.

Dr. C. P. Fordyce, Secretary.

The tenth annual commencement of the Wise Memorial Hospital Training School for Nurses will be held at the Temple Israel, Omaha, April 25, 1918. There will be seven graduates.

The following editors of State Medical Journals are among those now in the service:

Dr. Graham E. Henson, Florida.
Dr. W. C. Lyle, Georgia.
Dr. Frank Y. Gilbert, Maine.
Dr. F. C. Warnshuis, Michigan.
Dr. C. A. Thompson, Oklahoma.
Dr. Holman Taylor, Texas.
Dr. J. P. McMahon, Wisconsin.

Captain J. B. Potts and Captain J. Clyde Moore, Jr., who are connected with the University of Nebraska Base Hospital No. 49 are stationed at Hattiesburg, Mississippi, and are on the instructional force at the Medical Officers Training Camp at that point.

---

The New Hotel Conant, Sixteenth and Harney, Omaha, will be opened May 1st, under the management of Mr. G. Conant, one of our esteemed Journal patrons, in connection with the Sanford Hotel at Nineteenth and Farnam and the Harley at Twentieth and Farnam. The Hotel Conant is especially commended for the accommodation of physicians in attendance upon our State Medical Convention, May 6, 7 and 8. It is a fire proof structure, located in the center of the business section, conveniently reached by all car lines from the depots, and with its 250 rooms, each with its own bath, at prices ranging from $1.50 to $3.50, is an attractive addition to the downtown hotels of Omaha. We predict for this splendid new hostelry the same success which has attended the Sanford and the Harley under the capable management of Mr. Conant.

---

### What Your Liberty Bond Will Accomplish.

$18,000 invested in Liberty Bonds will equip an infantry battalion with rifles.

$50,000 will construct a base hospital with 500 beds, or equip an infantry brigade with pistols.

$100,000 will buy five combat airplanes, or pistols, rifles, and half a million rounds of ammunition for an infantry regiment.

---

### Third Liberty Loan Button.

The button which will be given to every subscriber to a Liberty Loan Bond of the third issue, whether of a $50 bond or a $10,000 one, will have a border of brilliant red, and a blue field with a liberty bell, and the words "Third Liberty Loan" in white.

Sixteen million of these buttons are now ready for delivery and will be given out when the subscriptions are made.

---

### Your Fifty Dollar Liberty Bond.

It will protect 1,000 soldiers from smallpox and 666 from typhoid. It will assure the safety of 139 wounded soldiers from lockjaw, the germs of which swarm in Belgian soil.

It will render painless 400 operations, supply two miles of bandages—enough to bandage 555 wounds.

It will care for 160 injuries in the way of "first-aid packets."

It will furnish adhesive plaster and surgical gauze enough to benefit thousands of wounded soldiers.

Every purchaser of a Liberty Loan Bond performs a distinct individual service to his country and to our boys fighting in France.

---

### Lend—Not Spend—Your Money.

If you lend your money to the Government, you may be quite sure that it is going to be used for some national purpose—to prosecute the war successfully, to care for, equip, arm, and supply our soldiers in France, to be used by our navy in ridding the seas of the murderous U-boats.

But if you spend your money even with the belief that by putting it into the channels of trade others into whose hands it comes will lend it to the Government, you will have done something the patriotism of which may be very questionable.

First you have withdrawn from the supply of material of the Nation something to replace which in the market will require labor and material which should be devoted to war purposes

Second, the person to whom you pay your money may also use it to purchase things requiring material and labor which should be devoted to war purposes. And the person to whom he pays it may repeat the operation.

But when you lend your money to the Government instead of spending it, you will at once lessen the drain to a certain extent on our country's resources, its material, its labor, and its transportation facilities, and in addition you supply your Government with money to be used in winning the war.

Every purchase of a Liberty Loan Bond is an individual act toward bringing victory to America and her allies.

---

We would like to call the attention of all our physicians attending the State Medical Convention in Omaha in May, to the unusual advantages of the Wellington Inn as a stopping place when in Omaha. The quiet, restful atmosphere about this hotel, though located on the busiest street, only one block from Convention Headquarters, will appeal to all, especially those accompanied by their wives. One of the attractive features of this hotel is a somewhat secluded cafe, as well as a more public lunch room opening off the lobby. The comlpeteness of the furnishings in the private rooms, even to the well fitted clothes closets in each one, and the little personal touches rarely found in a hotel room, make this one of the most homelike places for either in-town or out-of-town guests. With its one hundred and fifty rooms and its splendid diningroom facilities, it is specially adapted for headquarters for conventions, committee meetings, and similar uses.

---

## NEBRASKA STATE MEDICAL ASSOCIATION. BOARD OF COUNCILORS.

1st District—J. B. Potts, Omaha.
2nd District—H. J. Lehnhoff, Lincoln.
3rd District—I. H. Dillon, Auburn.
4th District—L. Stark, Hartington.
5th District—R. C. Byers, Nickerson.
6th District—E. O. Weber, Wahoo.
7th District—W. L. Curtis, Fairbury.
8th District—W. J. Douglas, Atkinson.
9th District—M. S. Moore, Gothenburg.
10th District—S. F. Sanders, Holdrege.
11th District—H. E. Mantor, Sidney.
12th District—A. J. Stewart, Mitchell.

A report by each Councilor is a Constitutional Requirement.

Reports will be received from the following Officers, Standing Committees, and Special Committees.
Secretary, Treasurer and Librarian.

### STANDING COMMITTEES.

Committee on Scientific Work—Joseph M. Aikin, Chairman.

Committee on Public Policy and Legislation—C. L. Mullins, Chairman.

Committee on Care and Prevention of Contagious Diseases—B. W. Christie, Chairman.

Committee on Medico-Legal Defense — A. S. v Mansfelde, Chairman.

Committee on Arrangement—B. W. Christie, Chairman.

### SPECIAL COMMITTEES.

Committee on Revision of Constitution and By-laws—A. D. Nesbit, Chairman.

Committee on Cancer—D. T. Quigley, Chairman.

Committee on First Aid to the Injured—A. R. Mitchell, Chairman.

Committee on Journal—F. A. Long, Chairman.

Committee to Investigate Legal Status of Nebraska State Medical Association—A. S. v Mansfelde.

Committee on Auditing Accounts—A. B. Somers, Chairman.

---

### Control of the Careless Consumptive.

D. R. Lyman, of Wallingford, Conn., publishes in the American Review of Tuberculosis, for March, a paper read before the Connecticut State Conference of Charities and Corrections, in May, 1917, on the control of the criminally careless consumptive. Though much has been done in the anti-tuberculosis campaign in the way of education and relief there is still no adequate means of handling the persistent and criminally careless consumptive by whom the disease is so largely disseminated especially among children. There is a lack either of the necessary statutes, of the will to enforce them or of the necessary institution. Lyman cites typical cases in point. In urging for proper provision for the handling of such cases he argues that the cost will not necessarily be great since the necessity of submission must go from the institution for restraint to sanatoria already provided.—Lyman, D. R.: The Control of the Careless Consumptive, Am. Rev. Tub., 1918, Vol. 2, No. 1.

---

### Predisposition.

The American Review of Tuberculosis for March publishes an editorial on "Predisposition." As the imaginary systems of the ancients offered an explanation for natural phenomena of which they had no clear conception, so the term "predisposition" has been used in medicine as an adequate explanation for conditions that are not understood. Before Villemin and Koch proved tuberculosis to be due to an extrinsic cause the disease was said to be due to innate "predisposition." With the further development of knowledge that most people are infected, with tubercle while comparatively few are ill with tuberculosis the same "predisposition" is invoked as an explanation for the illness of the few. The fact that perfectly definite and well understood mechanical factors are to be found in many of these cases should suffice to rule out the use of such meaningless because ill defined terms. The writer pleads for a more exact mode of thought, a clearer definition of terms and for investigation of the many definite problems that are at hand rather than the postulating of pretty theories that explain nothing, and merely keep us in a comfortable state of vague ignorance.—Editorial: Predisposition, Am. Rev. Tub., 1918, Vol. 2, No. 1.

---

## THE CHICAGO SESSION.

### Section on Miscellaneous Topics to Consider Reeducation and Rehabilitation of Disabled Soldiers.

At its recent meeting the Council on Scientific Assembly arranged for meetings of the Section on

Miscellaneous Topics, the subject to be taken up being the reeducation and rehabilitation of the disabled soldiers. Major Frank Billings, head of this division in the Surgeon-General's Office, has accepted the chairmanship of the section. The subject is one of great importance, especially to medical men. Further announcement will be made later.

### Special General Meeting.

In addition to the patriotic meeting which will be held on Thursday evening, June 13, and which will be addressed by men prominent in public affairs, there will also be a general meeting on Wednesday evening, June 12, at which eminent physicians who have been active in the medical military service of our nation and its allies will take part.

### Section Meeting Places.

The tentative arrangements for places of meeting are as follows:

Section on Practice of Medicine—Banquet Room, Hotel Morrison.

Sections on Ophthalmology and on Laryngology, Otology and Rhinology.—Grand Ball Room and Red Room, respectively, Hotel La Salle.

Sections on Nervous and Mental Diseases and on Dermatology—Ball Room and English Room, respectively, Blackstone Hotel.

The remaining sections will be grouped, meeting in the Auditorium Theater, the Auditorium Hotel and the Congress Hotel. The theater will house in its main auditorium, the Section on Surgery, General and Abdominal, and in two smaller halls, the Sections on Genito-Urinary Diseases and on Gastro-Enterology and Proctology.

In the Auditorium Hotel, the Ball Room will be the meeting place of the Section on Pathology and Physiology, the Ladies' Parlor the meeting place of the Section on Pharmacology and Therapeutics, and the Section on Preventive Medicine and Public Health will meet in the banquet hall.

In the Congress Hotel, the Elizabethan Room will be the meeting place of the Section on Orthopedic Surgery and the Gold Room, the Section on Obstetrics, Gynecology and Abdominal Surgery; the Florentine Room, the Section on Diseases of Children, and the Green Room, the Section on Stomatology.

The Hotel Sherman will be the general headquarters where will be housed the Registration Bureau, the Information Bureau, the American Medical Association Branch Postoffice, as well as the Scientific and Commercial Exhibits.

In next week's issue the accommodations offered by these and the other hotels of Chicago for those who attend the annual session will be announced.

## Case Reports.

### Report of Case of Persistant Hiccough.

L. M. Stearns, M. D., Kearney.

Mrs. T. Age 19, presented herself to me on the 23rd of November, 1917, giving the following history. Two years ago she became pregnant and was delivered of an eight-month baby which for some unaccountable reason died. The case was terminated by forceps, otherwise the puerperium was normal. At the third month of the pregnancy she began to have attacks of hiccough which came on daily about 5 p. m. and sometimes lasted all night. They were so violent at times that she could not rest and shook the bed. On different occasions she required morphine to control them. At the time I was called she had had none for about a month. They seemed to be aggravated by her menstrual periods. She complained a good deal of backache and dysmenorrhoea.

Examination showed a young woman of slight build, slightly anemic. Spur on left nasal septum, laceration of the cervix with acute antiflexion of the uterus, and a laceration of the perineum of the second degree. No evidence of focal infection or other local irritation in any other part.

In the review of her history and the fact that her symptoms came on at the time of her pelvic disturbance I came to the conclusion that her trouble was aggrevated by the laceration of the cervix and perineum and advised her to have that matter remedied.

On the 29th of November I did a trachelorrhaphy and perineorrhaphy. Following the operation she had several attacks of hiccough which made an opiate necessary. I might say in this connection that she had had all of the usual remedies applied and this was the only one that seemed effective.

Following the operation I put her upon fresh Blauds' to aid in clearing up the anemia. On the 20th day of December she had her last attack of hiccoughs and reported to me about the first day of February that she had gained eleven pounds.

I take the liberty of reporting this case on account of the fact that it is somewhat unusual and the source of the irritation so remote from the organs affected. Naturally one would think of some focus of irritation in the upper respiratory tract or the oral cavity but in this case it proved otherwise.

## Book Reviews.

Obstetrics by J. Whitridge Williams, Professor of Obstetrics, Johns Hopkins University; Obstetrician-in-Chief to the Johns Hopkins Hospital, Baltimore, Md. Fourth enlarged and revised edition with seventeen plates and six hundred and eighty-five illustrations. New York and London: D. Appleton & Company, 1917. Price $7.00 net.

Prof. Williams has added to the text of the former edition and increased the number of illustrations. The science of obstetrics is advancing, and unless the practitioner studies these new editions, he will not be able to help his patient as he might. The chapters upon anesthesia, including "twilight sleep" and Caesarean section, are complete. Prof. Williams' advice in the use of pituitrin is concise and wise. His treatment of abortion and premature labor is especially comprehensive and clear.

The book as a whole makes a complete text book on obstetrics.

C. W. P.

# THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, LINCOLN, MAY, 1919

Vol. III. Norfolk, Nebraska, May, 1918. No. 5

## CONTENTS

Page

President's Address, C. L. Mullins, M. D., Broken Bow........ 137

The Banquet ........ 142

Precancerous Conditions of the Breast, Michael G. Wohl, M. D., Omaha........ 153

Editorial ........ 154

Tuberculosis in Children, Floyd Clarke, M. D., Omaha........ 158

Changes Necessary to the Future Practice of Medicine, C. A. Roeder, M. D., Omaha 160

Address by Major Jump, before the Nebraska State Medical Association, June 8........ 164

Report of Officers and Committees—

State Secretary's Report........ 165

Report of Committee on Scientific Work........ 166

Report of Librarian........ 166

Book Reviews ........ 168

Notes ........ 168

## President's Address.*

Nebraska State Medical Association.

C. L. Mullins, M. D., Broken Bow.

Members and Friends of the Nebraska State Medical Association:

In conformity with the custom of our society it is one of the duties of the president to call to the attention of the association, such matters, as in his judgment, should receive its practical consideration. In reviewing our past activities, and looking into the future, so many matters appeal to me as needing attention that I have found it difficult to eliminate, to determine what are in my judgment, the less important. The needs of the war in its successful prosecution are paramount. The needs here are vital, urgent, immediate. I feel that we should engage in no activities, no matter how important locally, that can in any way interfere or hinder the giving of our full strength to our government in prosecuting to a successful conclusion the war in which we are engaged.

But first, I wish to express to the members of our Association my sincere appreciation for the high honor conferred upon me. It is a great honor, and carries with it responsibilities I feel ill prepared to meet. I can only ask that you give me the same sympathetic support and indulgence that I feel like extending to you in your several capacities. During the past year many of our members have quietly, but loyally, responded to the call of the government and have volunteered in the medical service of the Army or Navy. This has not only made inroads upon our membership, but has taken away from the immediate support of the association several of our officers. It speaks well for the splen-

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

COL. JOHN MONROE BANISTER, M. C., U. S. A.
President-Elect Nebraska State Medical Association.

did organization effected in the past, that it has run so smoothly and efficiently in the absence of these officers, among them some of the most active in our society. The president has not availed himself of his prerogative of filling some of these vacancies, but this should be done in the future, and his so doing should engender no harsh criticism.

It is true now, as it has always been in the history of this country, that physicians are among the most patriotic of our citizens. They have responded promptly to the country's call. The plan of raising medical officers for the army is by voluntary enlistment. We have in the past been very proud of our volunteer armies, and justly so. But it is also, as true now, as ever, that the volunteer system of raising an army in all its branches, brings about a very inequitable distribution of the burdens of war. In the matter of physicians some communities will be nearly, or totally bereft of medical aid, while others are not touched in this respect. I am a convert to the idea of conscription of everything needful to win this war, including physicians and surgeons. I would like to see this society go on record as favoring government conscription of physicians, along with all other classes of society needed to perform any special war service. I do not recommend this because physicians have not responded freely to the call, but because the volunteer system has proven in this as in past years, inequitable. In conscription, as applied to men of medicine, the burden can be equitably distributed, it would leave no room for slackers, and it would also insure each community its fair share of medical service. During the past year our governor has called upon our state association for its aid in war work, and your officers took the liberty to place the whole machinery of the association at the disposal of the governor, and through him, of the federal government. I am sure that this section will meet with your approval. It is evident to all, that organized effort is superior to the efforts made by the same number of people outside an organization. Our organization can be of great aid to the general and state governments in this war. This is an additional argument for a larger and stronger organization of the medical forces of this state under the banner of our state association. If conscription of physicians is not adopted by the government, then our state association, through its component county societies, can and should greatly aid in securing the necessary number of physicians for the army and navy, and also in helping to secure an equitable distribution of this burden. I would urge each of our county societies to at once make every possible effort to get into the county society every reputable physician in their county. I would also urge each county society to pay the state association dues, and thus maintain in good standing each member of the society absent in army or naval service. This, a small thing to do by those enjoying the comforts of home, will help maintain the strength and spirit of the State Association, and the Association Journal will be very welcome to the absent members.

I again urge you, as physicians and citizens, to take a more active part in the politics of your country, both local and general. There is no reason why physicians should not take a leading part in the politics of their community. Their communities, and the country as a whole, would be the better for it. The need of this is now greater than ever. A considerable portion of our population is of foreign birth or ancestry. Many of these have lived in communities, and lived much to themselves, and continued foreign customs and habits of thought, as well as often the exclusive use of a foreign language. This has sometimes amounted to transplanting an exotic plant upon our soil, and among our free political institutions. A foreign language press, often vicious, has aided in fostering this condition to the detriment and even danger of our political institutions. What other class of society is so familiar with the condition, and the people here described, as the family physician? It is true that these people have, as a very general rule, a great respect for the word of the doctor. It is now simply a part of his patriotic duty to aid in correcting this condition. These people will give heed to his plain friendly statements. He can aid in clearing up to these misguided the real causes of the war, our objects in the war, our firm determination to fight it to its logical conclusion and win; and the position they would be in should they show disloyalty to their adopted country, or even luke-warmness. He will be doing, both his country and these people a great kindness by carrying the message of truth about the war home to them. It being our own fault, that we have allowed a vicious foreign language press to teach and perpetuate allegiance to a foreign and vicious government, it becomes our plain duty to correct the condition. Physician can and should aid in this. It is as much their duty to protect from unjust criticism and treatment any, and all of these people, who prove themselves loyal, as it is to aid in bringing to justice any such persons showing disloyalty. The time for temporizing has passed. The greater one's opportunities for aiding the federal government, our government, the greater his responsibilities.

There are many matters to which I should like to call your attention, and ask for action, but I feel that nothing should interfere with the calls of our country during these critical times, and so very much must be left for action until we shall have done our part to destroy forever, we hope, this beast of prey now abroad in the world, until in fact the world has been made a decent and safe place for decent people to live. The least a physician, remaining at home, can do, is to support with his liberal subscriptions and his constant effort, the Red Cross and other war activities. If any have not, they have missed the spirit of the Nation in the war, and a golden opportunity to do a great and useful service to our country, our boys in arms, and our splendid allies. The sacrifices and even the disagreeable things we need to do are small matters when compared with what our own sons are doing. The war, if fought out to its logical conclusion by our enemies, will entail for us a great wastage of man power. Last year three hundred thousand children, under five years of age, died in the United States. Most of these precious lives were wasted. With intelligent attention the great majority could have been saved to the Nation. Nebraska's share of this loss, based upon the statistics of 1910 is 1385. The government is calling upon physicians to simply do what is their plain duty, to help prevent this waste. If the baby registration in your county and community has not already been carried out, it is your duty to at once get your organizations devoted to child welfare, busy in carrying out this important measure. If you have no local organization, it is your duty to help make one, and make it useful. Physicians should be leaders in this work of child saving.

At the State Fair at Lincoln, there has been conducted for several years, what has been popularly called a "Baby Show." It has been intended as a part of what is called the "Better Babies" work with much of the show feature. This show feature, I should judge after some personal observation, is at present inseparable from this work at the State Fair; but this work at the fair can, and should be greatly improved, made of real scientific value and practical benefit to mothers. Only childrens' specialists with one or two specialists in other fields of medicine should be employed to conduct these examinations, and then with a limitation of the amount attempted, valuable work could be done and physicians from different parts of the state could visit and study the methods used to their advantage, and then, if they have not already done so, conduct such work in their own communities. Defects, slight at first perhaps, may be detected and remedies suggested that may and often will save the child from a life long handicap. This work also properly calls attention to the baby, advertises him, popularizes him, something he sometimes needs, makes in fact for better care and bringing up of the child to the everlasting welfare and glory of our country. Last year at the suggestion of a woman member of the Nebraska State Medical Association, an additional day at the State Fair was given for the benefit of the defective children. For this days work the older specialists in childrens' diseases and other specialists were gathered, and a beginning was made that will do, if properly conducted in the future, a great and needed work in the state. Your County Society should be a pioneer in carrying on this better babies work. It is worthy your best endeavor. Don't leave it to the women alone. They need your sympathetic aid.

For the first time in her history, Nebraska has a full time health department. It is not large, not even now large enough, but it is the nucleus about which ultimately may be built a larger and more efficient. This department is starting out to do some real health work in Nebraska, and it should be the pleasure of every loyal physician in our state to cooperate cordially with the department to the end that Nebraska may take its rightful place among the progressive states of the union in public health work. There are some things of which Nebraska physicians may not be proud. Among them is the fact, that we are not in the federal accredited vital statistic zone. Our birth and death reports have been very incomplete. I do not wish at this time to recommend great outlay of time and expense, upon the part of the committee of our State Association, but there are some matters that should receive the attention of our legislative committees. The vital statistic law is inadequate and should be amended or repealed, and something like the federal model law aodpted.

The administration of our public health department is made difficult by reason of defects in our statutes. The seeming overlapping of the authority of county and city boards of health should be corrected, the duties and authority of each defined. Under the present statute the county commissioners or supervisors constitute the board of health. This has been a failure, and County Boards of Health should be created in which medical opinion dominates. The present law allows a definite sum as the conpensation of the county physician, who in rural communities is also the county health officer. This is usually entirely inadequate, and indeed often compels ignoring the statute. Provision should be made for proper renumeration of county and city health officers. It is most unjust to ask physicians to give so much of their time without compensation. The laws with respect to communicable diseases and their control need revising to bring them to a state of efficiency with full provisions for their carrying out. The matter of sewage disposal should be dealt with and the state health department should receive its proper standing with regard to city water supply. Much money now wasted could be saved if first the state health department were consulted, before installing the plant. It is still true that a law without an adequate means of enforcement, including a penalty, is too often observed in the breach. Proper and definite penalties should be prescribed for violations. I recommend that the penalty for refusing or failing to report and properly quarantine communicable diseases by physicians be made revocation of license to practice medicine in this state. A physician, who through ignorance or for other reasons fails to comply with the legal and proper requirements in preventing the spread of communicable diseases is unfit to be entrusted with the care of the health of the people of this state. I feel confident, that it will not be difficult to obtain these needed changes in the statutes. The statutes, in defining the duties of the state health department as distinguished from the advisory board are rather hazy. The duties and powers of each board should be specifically defined. The advisory board should be re-named the State Board of Medical Examiners, the name thus being intelligible and inconformity with such boards in other states. This board should have the duty of issuing and revoking licenses to practice medicine, establish the standards of medical colleges and such duties only as are usually performed by examining boards while the state health department should have to do only with public health matters. This legislation will remove the possibility of misunderstandings in the future, and put the proper responsibility upon each board. The statutory requirements for a medical college in good standing should be changed to require a six years course above a high school education, this bringing us up to a desirable standard and in harmony with progressive states. I would advise that a special legislative committee be appointed to secure this legislation and that if agreeable to all concerned that this committee act in conjunction with the state health commissioner and the state advisory board.

I feel that our system of medical education in America is becoming antiquated. The young graduate is licensed to practice medicine and surgery in all their branches. I feel confident that he is not equipped to do this. While this plan may not now be feasable, I feel that there should be at least two licensing boards, and that the physicians be licensed to do the things he has learned to do. The system followed in England might be adapted to our needs. If the physician who has received only the training incident to the ordinary medical course, desires to do major surgery, he should be required to prepare himself to do this work properly before he is licensed to do it. I am sure that much harm is done by the indiscriminate doing of major surgery by some ambitious, but poorly trained doctor. I feel that the medical colleges in Nebraska, can even now take up the matter of giving advanced instruction in theoretical and practical medicine and surgery to a limited number of graduates in medicine.

In the past it has been customary for the profession of the community in which we held our annual sessions to provide entertainment for the out of town members and their families. This entertainment has often been excellent and much appreciated by the visiting members and their families. It has grown to be quite an item of expense and effort for the entertaining members. I have thought sometimes that it must have been a real burden to them. I believe that our state association should use its every influence to better public health conditions. I would recommend that hereafter at each of our annual meetings, instead of the usual entertainment, a public meeting be arranged for the purpose of public instruction to which the public, all members and their families would be invited. Men of ability along special lines could be invited to address these meetings and other proper means of public instruction could be undertaken. The meetings could be properly advertised and arranged for by a committee in the community in which the meeting is to be held. The benefit of such meetings would not be confined to the community in which they are held, but would flow out to the whole state. Such meetings could be arranged with little outlay and would be in conformity with a wise tendency.

---

### The Banquet.

The banquet which concluded the fiftieth annual convention of the Nebraska State Medical Association was held at the Fontenelle Hotel, on the evening of May 8, President Charles L. Mullins acting as toastmaster.

At the conclusion of the repast, a toast was drunk to General Pershing.

Toastmaster: This evening marks the conclusion of the fiftieth annual convention of the Nebraska State Medical Association—half a century old. It marks the conclusion of a session in which there has been, I have noticed all through, an absence of levity, the presence of good will and good humor, and a desire to work perhaps more in harmony than on years before.

Now this evening's meeting is to be devoted to the consideration of what is uppermost in all of your minds—the war. That is what you are all thinking about nearly all the time, are you not?

(Cries of "sure!")

I am very proud of the response medical men have made in all of our country. Take the same number of men in any other line of work, having homes and families, as most physicians do—would there have been more of any other class responded to the government for the same renumeration as there have of physicians? I believe not. That is why I said today in the annual address I thought the physicians in this country had always been among the most patriotic of its citizens, and I think so still.

Raising the large number of physicians and surgeons to be needed now and in time to come is quite a problem. The American Medical Association has been asked by the Surgeon-General of the United States army to co-operate with the government in helping to raise these men in the best, the most effective and fairest way. Dr. Mitchell is as familiar, I am sure, with medical affairs as any man in Nebraska. Now he will tell you about the plan.

Dr. A. R. Mitchell: Mr. Chairman, Ladies and Gentlemen: I am glad to see you began this meeting with a toast to General Pershing. I think Nebraska has a right to claim some interest in General Pershing. He was, as you know, commandant at the University for many years.

It is always pleasing to talk to Nebraska people—especially Nebraska doctors. To Nebraska people because they are generous—generous in the purchase of Liberty Bonds and Thrift Stamps, and generous also to the men who attempt sometimes to make addresses to them and are not very well prepared. I did not know until I came here I was to speak on this occasion; but I saw my name on the program and returned home to make some preparation. Unfortunately I was engaged otherwise during the entire evening, so I will have to make some very short and disconnected remarks.

I suppose you are all familiar with the calls made by the Surgeon-General for an additional five thousand men to the Medical Reserve Corps. If you are not familiar with that call, it appeared in the April 13 number of the Journal of the Association. The call speaks for itself. It recites everything, or nearly everything, that I can tell you tonight, and will give you a clear conception of what is wanted by the Surgeon-General. Some confusion has arisen by reason of the fact that numerous other organizations have been very active in organizing the First Relief Corps. That organization has also sent out an appeal over this country for five thousand men. This appeal of General Gorgas we have to deal with comes directly from the Surgeon-General to the American Association; and our organization takes no cognizance whatever of what any other organization is doing. Our duty is to respond to the call for five thousand men through the American Medical Association and its commissioner.

There are several things that should be understood in connection with this effort. From the second paragraph of this call I read: "The plan contemplates a close co-operation between the office of the Surgeon-General and the officials of the American Medical Association through the different state and county medical societies and through the different section organizations of the American Medical Association." That part is perfectly plain.

Then the position General Gorgas takes in recognizing what the Association has done in the past is in the concluding paragraph, where he says: "In making request of the American Medical Association for its co-operation, I am appreciative of the very valuable assistance which has been rendered the Department by the Association in the past." That simply shows the attitude of the general's office and what it expects the Association to do.

Following this call, the House of Delegates of the American Medical Association, through a postal vote, authorized the Board of Trustees to take up the work. In their called meeting they appointed a committee of three members: Dr. West, of Colorado; Dr. Harris, of Chicago, and, at my request, Dr. McKnight of Connecticut. I was asked to go on the board, but could not take the time for it at that time. Unfortunately, Dr. McKnight died on Christmas morning, and I was placed on the board in the position he had occupied.

This committee, which for want of a better name we call the War Committee of the American Medical Association, met in Chicago and discussed the matter as to the best course of procedure. The result of that discussion you will find in the April 20 number of the American Medical Association, which gives the call of the War Committee. At that meeting several matters were discussed, among them was whether it would be necessary to request a universal registration of all physicians under fifty-five. Of course you all understand there is no possibility of a draft of physicians unless you draft all men in the country under fifty-five years. But it is, I believe, judging from things I have heard, quite a universal feeling that there should be a universal registration of all physicians under fifty-five, in this country; that they should register and become members of the Medical Reserve Corps, so that the government in case of necessity can put its finger on them if it wants them.

Another thing emphasized was that the industries and the communities of the country were not to be disturbed any more than possible. In large industries and in rural communities where physicians are needed, or scattered, it is important not to leave those communities unprotected. Now it is a fact that the largest percentage of enlistments in the Medical Reserve Corps comes from the smaller towns. Cities like Omaha and Lincoln are filled with men eligible to the Medical Reserve Corps, and some of them are really eligible to draft, and I would like to see those drafted who have not joined, because they are young men just starting out. Perhaps they have been in practice three or four or five years and have established enough business so that they are getting on their feet. While the older men in the community can remain and attend to business, they don't like to give up their business and go into the service.

Another thing we considered was the best way to get this organization in co-operation. At our first board meeting we decided upon a call of the secretaries of all the states. Last Tuesday morning forty representatives —nearly all secretaries—of this country gathered at the American Medical Association headquarters in Chicago, and there we had a talkfest which lasted all day. Most of you don't think your secretary is much of a talker. We limited these people to five minutes. It took one rap to get most of them down, but it took two raps to get Dr. Aikin down after he was started. (Laughter). It was decided we would follow up the suggestions contained in the Surgeon-General's call for men; the call would go through the various state organizations.

Before this call, the Association had placed at the disposal of the Medical Section of the Council of Defense practically all its machinery in assisting to organize the Medical Reserve Corps. The Association asked and took no credit for it. I do not suppose there are many men in this room who know that a very large percentage of the printing done at that time came through our office in Chicago. (By the way, it would make you proud of this Association to visit its offices). In order to give you a detailed account of that, I clipped from the last Journal a statement which explains the amount of work we have done in the office and sent out as really the work of the National Council of Defense. At the first call for Reserve Corps men, there were 23,000 physicians responded. On April 26 there were 18,693 who had accepted commissions. That's a pretty loyal response of the physicians of this country. (Applause). I don't see why we should be so modest as not to announce the fact.

A great many people have raised the question—many physicians did in Chicago—whether it might not be difficult to raise this 5,000 additional medical men, because the smaller communities are already quite depleted. I say "medical men," because we do not want all surgical men. This call includes an increment of 2,500 men annually to the close of this war. From what I have observed in the office of the Association in the last two weeks, I believe we are going to raise without very much effort this additional 5,000 men, simply a continuation of the response.

We have the percentages of the various quotas of men in the different states pretty well in hand now. In about two weeks there will be received by the secretaries a complete roster of all the physicians in the United States by counties, as well as by states; so that we will know the number of men, the population of the county, the number of men enlisted, and the number of men accepted. From that you can figure out the percentages, or see them already tabulated, without any difficulty whatever. We may remember that between 1000 and 1500 will be added to the number from those who have already been offered their commissions. At the beginning of the war there were 449 medical officers in the Reserve Corps. Today there are about 22,000.

When the call was first made, it was for 21,000 officers, estimated on the basis of 3,000,000 men. There are supposed to be seven medical officers per thousand. I believe that has been raised to ten.

I should like to give you some of the figures as to what your Association has done during the period of this war. In April, 1917, the Journal began to appeal to the medical profession. In that month we published a special appeal and with it an application blank, and that first issue contained 64,000 application blanks. One month after that we published another call and another application blank, and that contained 67,000 application blanks. Many of these were filled. This was done under the other regime. The next work done was ostensibly by the Surgeon-General, who assigned to our office Major J. R. McKnight. The work began May 28 and continued up to July 16. At that time the total number of circulars addressed was 39,710.

Some of you asked about cards. This covers that point. The reply cards received were 17,874. The requests for information answered would run up into large numbers. That illustrates somewhat the work of the American Medical Association through the Council of Defense, for which it has asked no credit, and we want and claim no credit, except that we are all in this proposition for the benefit we can give to the United States government in this war. We all are working to the same end.

We must have more medical men. It doesn't make any difference what other agencies are at work, it is the duty of the American Medical Association, by the appointment of committees, to raise this additional 5,000 men, and I think we will do it without any trouble.

Within a few days there will come to the secretaries of these associations such literature as is necessary to disseminate the knowledge required, and the secretaries will then call the sub-committees in the counties, and the organization will be completed in that way. First there is the secretary of the state organization; then the secretaries of the county societies.

I believe that covers pretty well what has been done so far. I have been asked several times since I have been at this meeting a question which surprises me somewhat. Of course I realize it is a hard proposition for a young man just started out to give up his business and go to war. But we must all make sacrifices. I have been asked, "What force is there back of this organization, or in this government, to compel me to enlist if I don't want to?"

I can best answer that question by saying there is a force in this world which is above and beyond the law, which usually precedes the law, and that is the force of public opinion. I believe that is the force which will be directed to these men who feel they can't afford to make the sacrifice necessary. I believe further that no man will ever live long enough—no matter if he reaches the highest limit of age—to write the regrets he will have if he doesn't fill a blank and become a member of the Medical Reserve Corps.

(Applause).

Toastmaster: In the Annual Address, I said it was my opinion that everything necessary to help win the war should be drafted. And that's the way I feel about it. As Dr. Mitchell has just indicated, it is up to the county societies to see that this burden of the war is distributed in a fair manner; that one community is not left without medical help and another contribute nothing.

We have a good many members of the Nebraska State Association who have enlisted in the army and navy—approximately 380. We have some of them with us this evening. Dr. Lord, an old member, has been engaged in work in the camps. We will hear from him. (Applause).

Dr. J. P. Lord: Brother Officers, Toastmaster, Fellows of the Association, and the Ladies: I have been the center of little groups since I came here, asking all kinds of information in regard to the service. I have been sought out by visitors down at Riley, asking for details of information; asking my opinion as to whether it was a duty, under the particular circumstances recited, for them to go into the service. One man said, "I have asked several already in the service and they have told me that that was a question for me." This individual said, "I feel that I can hardly decide it myself. I would like to have somebody tell me. It seems to me that you, being in and knowing all the circumstances, ought to be able to advise."

I said, "My dear friend, that is too personal a question. You know your circumstances. You know whether it is possible to make this sacrifice. A sacrifice it will be. It may be very large. You may not be able to anticipate in advance how large a sacrifice it really is. You wont know until you get in."

I think sometimes it is a good thing we don't know all the circumstances until we are in. We need to have our shoulders strengthened for the burden. I did not think until the first of January I was to rake up an income tax on my last year's business. And so it goes. I regret nothing, and you will regret nothing. In fact, I think you will feel better and feel relieved after you have gotten in. So that while it may be an economic question and one that concerns your family, and concerns them vitally; yet it is for you to decide. It is a patriotic question. Remember that your country needs you. Do you love your country well enough to make the sacrifice? It is a personal question. We can't advise you. We can only tell you of the necessity. When we are told that 5,000 are needed, we cannot excuse ourselves that the society has already contributed 380. We know Nebraska needs to contribute nearly an equal number. It is to be remembered that an overplus is always necessary, due to physical defects of the men, and one reason and another why they can't continue in the service, so we must be a little over-generous.

Many discouragements come to young men who have to count all the costs. I have been asked various questions in regard to the expense. It has been requested I make a statement in regard to the cost. Men have said to me, "This cost of equipment seems staggering to me. Is it true it costs from $500 to $700 to equip yourself?"

Nonsense! The suit need not cost more than $40. The shoes I have on cost $2.81. After you have spent $125 to fit yourself out, you will have to study to know how you can make wise selections for the balance of the $150. When you get ready to go to France, it will be probable it might cost double that amount. In regard to this other exaggerated sum, that is not necessary. It is not necessary to buy an overcoat that costs $80. A soldier does not require such mighty fine fabric as that. Mine cost $37. The cost of living in the army is ordinarily a dollar a day for your meals. A well conducted large mess will usually declare a dividend anywhere from 5 to 15 per cent, so that you have some money coming back, or it may go for the good of the cause. It doesn't exceed a dollar a day. For candy and postage stamps and street car fare you can at the best consume less than $10 a month. With the reduced expenses incident to a man in the service, with his family living economically, it doesn't require more for them than for many of our people with families who get along with from $100 to $150 a month at home. A doctor in the army is actually playing even with a lieutenant's salary, and with the added salary that will come because of the provision for rent and light and heat for the dependent members of the family. The monthly salary will be very much increased in this way, amounting to an increase probably of 30 or 40 per cent.

In yesterday's program I was down to furnish some discussion on the sanitary conditions of the army. That went by the board, and I was asked to say something on that subject on this occasion.

A well organized army camp is one of the most sanitary places in the world. Witness, if you please, the Canal Zone, previously a pest house. Witness Havana, New Orleans, and the Philippines, infested with yellow fever for three hundred years. Now they are veritable health resorts. Army camps are health resorts. There is what they call policing, and that takes care of all these things. All garbage is destroyed every day. They are furnished with the best of water. Everything is kept in the most sanitary condition. There is practically no disease originating within the camp itself. When new army camps are brought together, innumerable diseases are brought in. Now with the new organization these things are practically all cleared up before the men get into camp, so that a well organized army camp furnishes less mortality than an ordinary city.

I am going to take this opportunity to observe the reason of the success of the army in making health resorts of the Canal Zone and these other places mentioned is because of the military authority and policing that is possible because of the organization of the army; because of the force of command of the army that enabled them to do that. Communities must learn the same thing. One of the things that will come from army organization and discipline will be that we will enforce our health regulations; we will police our cities and police the country, and we are going to eliminate in that way preventable disease. The system originates in the army and it exists there. It is going to spread throughout the length and breadth of the country.

Fort Riley—a place Nature meant for a military camp—contains about 22,000 acres. It has natural stone, so that pavements are made throughout these camps. There is a perfect water supply, perfect drainage, a sandy soil, and after rains the surface is quickly dried up. Two of the chief disadvantages are the wind and the dust. That is being overcome largely by their covering the ground with a whole trainload of crude petroleum to control the dust. They are continuing to do the same thing this year. We are going to have less of that disadvantage down there. Trust the United States army to whip health conditions into line.

When I was a boy I recited from some Iowa orator who said that the right of primogeniture could make a king, but could never make one of Nature's noblemen. The right of birth, the divine right of kings, has outlived its day. Democracy has come forward to express the will of the people. The people are to rule. When this old order exists and men come into the rule of nations by "divine right"—so called—there are going to come to those thrones men mentally unbalanced; maddened with power, insane with ambition, and that has happened.

Not so very long ago there was enthroned in this country a king. He was kept there by an organized army that robbed the people of their sovereign right of personal liberty —of individual rule. That king was Old King Alcohol. He became so intoxicated with power, so insane with ambition, that he assumed our rights to rule. He became so entrenched that our rights were taken away. Our votes did not count. Why? Because we had enthroned a king. A year or more ago the king was dethroned. His cohorts have fallen away and are scattered.

The high king of Europe must be dethroned. It is our duty to come to the rescue of democracy; to "do our bit."

Fellow doctors, it is within your power to "do your bit" in service to your country. The call is in your hands. Will you sign your name? (Applause).

Toastmaster: Speaking of the sacrifices that doctors make, have you thought what sacrifices all the people in this country would make if Germany won this war? The greatest sacrifice we will make will be very small compared to what we will have to make if we lose.

Six physicians have gone from our thinly settled county. The one who made the greatest sacrifice went away and left a wife and the largest family of small children of any doctor in the country. He never said a word about making a sacrifice.

About twenty years ago today I received a message in Broken Bow I had been appointed to a medical office in the old First Regiment. I went, and I am glad of it. There was a little bond of feeling among the boys who served in that war. Among the men who go now there will be a strong bond. Those who can go—who are physically and mentally qualified—and do not, are going to have the rest of their lifetime to regret.

We have some other members of the Nebraska State Medical Association actively engaged in the work of building their part of the army. We have a young man—who isn't as young as he looks—a very valuable member of the Association—a worker, and I imagine he is working just as hard in this job as in the House of Delegates. Dr. Stark.

Dr. Lucien Stark: It has been my pleasure to have been a member of this Medical Reserve Corps since last summer. I have been at Fort Riley since last August. Dr. Lord has been in the base hospital end of the game and I have taken up the field-work end of army life.

Some of the men asked me what would happen when they came there. A great many things. You will have some pleasures and some jolts, and your dignity is apt to suffer, but it will recover. You need have no fear. You will get well. It isn't pleasant for any one to leave his easy system of living—coming and going when he pleases—to having his day's work outlined, and do it. It isn't the easiest thing in the world to stop sleeping on a nice, soft bed, and sleep on a cot, covered with two blankets. But if some parts of the life seem unnecessarily hard, you have to figure the type and kind of an enemy you have. At the present time I think we are in war with the most barbarous, degraded type of people who have ever lived. (Applause). That type of warfare has made many things necessary. For instance, we have our gas defense. It is presided over by Major Parker, a Medical Reserve Corps man who probably knows as much about gas as any man in the country. He divides the gases used for the three years by the Germans as follows: 1915, chlorine; 1916, phosgene; 1917, mustard oil.

You will remember in the rules of the Geneva and Hague conferences, warfare of this kind was denounced, and all agreed not to do these things. In this war the Germans introduced the gas warfare. You remember when you fooled around with chlorine in the laboratory it wasn't a pleasant thing. The chlorine got in the eyes of our allies; they couldn't see. They coughed and sneezed and were of no value. One of the highest tributes paid to the women of France is this: Thirty-six hours after the Germans discharged their gas, they had 250,000 orude gas masks at the front for the benefit of their men. (Applause).

Their chlorine gas did not prove so efficient as they thought, so they brought out a new horror—phosphine. Major Parker will tell you of its action; how it destroys men's lives, and the time required.

Then we come over to the horror of 1917—mustard oil. The green cross shell contains mustard oil. They explode, and the fumes are scattered in the various shell holes. It clings and remains for a long time. A wounded man is making his way back to the aid station. He gets in the shell hole and sits over the remains of a shell charged with mustard gas. Five or six hours after he sits down he develops a third-degree burn, with all the grief that comes with burns of all kinds. This is a very nice type of war! That's the kind of a nation with whom you are in battle.

In the Geneva and Hague conferences there was a rule prescribed that medical men should not carry arms except when fighting uncivilized tribes. I noticed twelve Alexander Colt's automatic 45's, so our government has come to the conclusion we are fighting an "uncivilized tribe." That's the type of thing you have to go up against.

In regard to the training camp idea, those of you who get into the Medical Reserve

Corps don't want to avoid going to a training camp. You know they are going to teach you what you should know if you go there. You don't know the army game. I don't. They assume you have your professional knowledge. They educate you in the other things you should know. In the field hospital we have six war tents. How many of you know how to put up a tent? That is one of the things we will teach you. How many of you know the difference between a hospital and war tent? How many know the tables of organization or the field service regulations? You go to school down there. You get up earlier than at home, and dress quicker, too. I think First Call is blown at 6:15, Reveille at 6:20, and Assembly at 6:25. You want to be out to answer "here," or you are going to have an awful bad half hour with the Colonel. It is very pleasant to see men with nice, soft hands stand out with no blouse or shirt and go through the usual setting-up exercises. Can you imagine Dr. Hull's doing it? (Laughter). I want to tell you he did it well. He dropped thirty pounds.

From 7:30 until 9:30 you will go up on the hill to drill. At the end of the fourth or fifth day you will wonder what drill was ever invented for. It is a system of mental discipline. You have to have it. Discipline of that kind is valuable.

From 9:30 to 10:30, a lecture on army regulations or some of the things along that line. If you happen to have Major Flynn, you will wish you had stayed awake while he was talking.

From 10:30 to 11:30, another lecture.

From 11:30 to 12:00, wash and get squared up for dinner.

At 1 o'clock you are turned over to the tender mercy of the field hospital men. They will entertain you from 1:00 to 2:50. I happen to have Major Hull's department. He didn't like to crawl under a tent at first, but he wore off some avoirdupois in the exercise.

From 3:00 to 5:00 the first week is the trying time. You take your first hike. When you get in at night, you are afraid you are going to die. The second day you go on another hike. You think you are going to die, but you don't care; it doesn't make any difference. On the third day when you come in, you are afraid you won't. (Laughter).

When you come down to the game and take up the branch of the field hospital, it's the sporty game! You are only five miles from the firing line. You are where you can see the show. It may be dangerous, but look at the fun you have out of it! (Laughter).

I will tell a story of two men in the colored division. One was asking the other about going over the top:

"What does this here 'going over the top' mean?"

"That's easy. You are over in France and in the trench. Right over here is the German trench. When it's time to go over the top they blow two whistles. The first gets you up and gets you dressed. You go up on the step about two feet off the bottom of the trench. You stand waiting to go over the top. Pretty soon you hear a lot of cannonading, and you hear two whistles. That is where you start over the top. You get your head up eight or nine inches and then you say, 'Good morning.' " (Laughter).

Now the field hospital game is the sporty game. You learn how to handle men. You will thank your lucky stars for the days you were back under Major Downs and he was handling you. That's the time when your dignity is going to get hurt. He told me how many different kinds of a chump I had made myself. I think I had, but it hurts your feelings for the time to be told about it.

About getting into the Reserve Corps: Don't wait. You have to make a sacrifice. You bought Liberty Bonds? So did the army. The Camp at Funston bought over $3,000,000 in the Second Liberty Loan. The Medical Reserve at Fort Riley only had a few men, but they bought $865,000 worth of Liberty bonds and will use them themselves.

Plan to come down and get into the Reserve Corps. The mere fact 383 are in the Reserve Corps is fine. It is fine, and a great credit to the 383 men who are there. But we have to have more of them. Nebraska has to contribute from 200 to 300 men. We can do it.

You have heard it said the present war is one of autocracy against democracy, but one of the greatest autocracies is in your own country. It is the autocracy of self. Perhaps you have taken your examination and it has been sent in, and you receive a commission. You say, "I want a captaincy or I won't go in." Come in. Get all you can. If any of you are fortunate enough to be sent down to Fort Riley, it will do you good. The commanding officer down there is one of the finest gentlemen who ever lived. But he is an army officer, and he is busy. There are lots of good men down there. You will find Ralph Webster wandering around the camp with his little manual of court-martial, and he will teach it to you. You will find one of the chief operators of the Mayo hospital down there. When you come down, you are coming down with a mighty good reputation. Nebraska looks good down there. At one time at Fort Riley, out of the ten commanding officers of field hospitals, four came from this state. Last Friday we shipped out three hospitals. Out of that, two Nebraskans were supply officers, and one Nebraskan a commanding officer of the field hospital. In the commanding hospital, all three came from this state. You have nothing to be ashamed of. You have everything to gain . It makes an easy road to travel. Come down to Riley if possible. Take your course of training. We will add ten years to your life, teach you discipline, and make better men of you.

Let's go into this war the same way Nathan Hale went onto the gallows—regretting he had but one life to give for his country. (Applause).

Toastmaster: The physician who had the family of little children received a first lieutenant's commission.

So far as the business side of it is concerned, the man will be considered a slacker when these medical officers return.

There came to this state many years ago a retired medical officer of the United States army, who had served out his time. I soon became acquainted with him through our State Association. He learned I had been for a short time in the army, and there sprang up between us what will spring up between these other officers who serve in the big war, in a larger measure. This gentleman to whom I refer can tell you of the army, where he spent many years. He can tell you they need some older men in medical service in the United States army.

I take pleasure in introducing Colonel J. M. Banister. (Applause).

Col. J. M. Banister: Mr. Toastmaster, Ladies and Gentlemen: I have been very much pleased at the speeches from our newly commissioned medical officers. It seems to me as though it were only yesterday Dr. Lord came up to my office. I don't think the Dr. Lord of that day knew the difference between a corporal and colonel, and it was gratifying to me to see how quickly he has familiarized himself with these things pertaining to army life.

I was much pleased with Dr. Stark's speech. He touched the keynote. I thought it was excellent. It has been longer since Dr. Stark went into the service, but it seems but a very few days. Now when I see these two gentlemen devoting their souls and energy and vim to this cause, it shows me what a great work the Medical Reserve Corps in general is doing. Let us look a little bit into that Corps. What is needed now in this country? We have heard the Surgeon-General has called upon us for 5,000 more men. You all realize what is at stake for us; you realize how many of our boys have gone to Europe; that we have already raised 1,600,000 troops; and you must know that the Secretary of War, since he has seen the conditions prevailing there, has come out and said we will have to raise 3,200,000 men as expeditiously as possible.

We are in the greatest emergency our country has ever faced. We must conquer Germany, or Germany is going to conquer us. If the allies break down, the United States will have to fight this war out alone—very probably in this country. The cabinet has issued a statement that the German nation has in its hands a plan of invasion of the United States, to be used in case of the allies' overthrow in Europe. Now from what has been set by the precedents in Europe, we can understand what will happen here. If the Germans land in this country, God help the women and children and aged, and everything we have done in this country that makes for progress!

What are we going to do? Are we going to stand back, turning one cheek and then the other for the slap, or are we going to do our part? Our boys are doing their best to stem the German tide. Are we behind those boys—those who are sitting down here comfortably at home, subscribing a few dollars to Liberty Bonds? The call is made for men to give attention to them; to take care of them when wounded and torn by shot and shell; to take care of them in our base hospitals abroad. Are we going to respond, or are we going to sit back and let these boys suffer for lack of medical attention? I would be ashamed of the medical profession if it now fell down and shirked this duty! We are up against this proposition, and we have to stand up to it like men. Those of us who have contributed our very flesh and blood to the cause feel we have a right to take care of them when they go there and fight for us in Europe.

What's the sacrifice of a few dollars in buying bonds? What is it? Why, it is a good investment for you. What I bought in bonds I do not think I have sacrificed. If you have red blood in you, if you are going to stand up for your country, you can't be thinking what Jones or Brown is going to do while you fight for the United States. (Applause).

We have to go. It is up to us as men to go. I feel the medical profession of this country is not going to fall down. I know how you feel. A great many men have talked to me and asked for confidential advice. I know a great many men have felt they were not able to do it. I know it would be digging up the very roots of their lives for them to go, so I can appreciate what is holding and has been holding a good many men back. I have letters from men saying, "I am desperately in debt. I am just getting established in a practice where I can support a family. I have a wife and three children, and my house not paid for. If I go away there is no income for my family, and if I become sick or lose my life, they would be destitute. What am I to do?"

Those men are up against a serious proposition, and we have to look at that from the right standpoint. But we must do our best to back our boys at the front. How can we maintain our self-respect if we find we do not have enough medical officers abroad to take care of the wounded?

In a recent letter from one of my friends abroad who went from a New York hospital, he said they had a 2400-bed hospital; were caring for the English, and the stream of wounded brought in was something perfectly astonishing—men so shot up they didn't know where to begin to operate! Every man who knew the slightest thing about surgical work was busy until he would drop in taking care of those men. Suppose they had not been equipped, how would they have been able to attend to those men?

I have had a great many members of the profession ask this question: "Why not let the young men go first and do the work?" and "Is it necessary for us who have reached middle age to go yet?" The United States government is not asking for all of our boys to be entrusted to inexperienced hands. We need young men fresh from the colleges. They can do active work with the field hospital. They can put down canvas and accompany the troops. That requires men in physical health. But when we come to attending to the most serious injuries and wounds of those boys in the base hospital, we need men who are experienced; who will not have to stop to think what some textbook at home may have said about the case. They have to go to work right away. They can't stop to think. They have to be prepared by the test of experience and skill to give these boys the best possible attention. These soldiers of ours have gone to make the supreme sacrifice for you who remain here. Now we need men who can take care of them. We don't want internes operating on hip-joint fractures; on serious injuries in the brain. We want men who know "where they're at," and what they are doing; and you can only find such men among the middle aged of the profession. They are the ones the government is calling upon to come to its assistance. (Applause).

Toastmaster: The last speaker on the program is one of the pioneers in the profession—Dr. Jonas. (Applause).

Dr. A. F. Jonas: Mr. President, Ladies and Gentlemen, and Members of the Nebraska Medical Association: It is indeed embarrassing for me to follow these fellows of the recent war. I could show you I am one who hardly knows the difference between a corporal and a captain. I am willing to learn. I hope before this war is over I will know something about the manual of arms and about court-martial, and even about "going over the top." I am particularly anxious about that, because Empey says the most polite men he ever met were in the trenches. When ordered to go "over the top," they all said, "After you, sir." (Laughter). As we grow older we try to grow more polite, because it is expected of us.

The question arises whether we shall go to war or not. I feel it is very much like the man who is about to become converted. There is an inner—perhaps a kinetic—drive that urges him on. Some of us who have had this inner drive have met obstacles in the way. Some have made applications and have learned in Surgeon-General Gorgas' office they are handy with the use of the blue pencil—usually "extreme age," with a circle around the number of years we specify; or the words, "too old."

On June 28, 1914, there was assembled together at the city of Zurich a little party, the occasion being a dinner given by Professor ————————. We had had a splendid time. I do not know when I have spent a more enjoyable time in the company of professional men than that evening. About twelve we thought it was time to go. The professor had excused himself in answer to a call. In a very few minutes he returned and said, "Something awful has happened!" When we inquired, he said, "There has been an assassination. The arch-duke and arch-duchess of Austria have been assassinated."

We thought it was horrible, and yet we could not see why he should give vent to such expressions of horror as he did. We said, "what is going to happen?"

He said, "This means a world's war."

In five minutes he detailed the movements upon the chessboards of Europe which have taken place since that time. We thought his solution fanciful, and that in his excitement he had put this and that together that would not happen. Even as we saw things upon the chessboard, we did not realize what was impending. A month later, in London, this great cataclysm broke, and the horror of it all impressed us so forcibly some of us have not gotten over this shock to the present time. Everything in a general way which the professor predicted at that time has happened. He was not a politician or statesman; but he knew the conditions only required a little match to bring about this great and horrible disaster which we are witnessing in Europe.

I said, "We have had presidents assassinated in the United States. We have never had wars over that."

He said, "You have a friendly nation upon the north, two great oceans on the sides, and a weak nation on the south. You can't have war."

We said, "We are so glad we live in a country which has no enemies we need fear!"

Now since the sixth of April last year, we are perhaps the principal belligerents. We feel upon our shoulders rests the supreme power. It is up to us to play the principal role in this war. Our allies are almost exhausted; their finances entirely; and it is for us to get our man power and material over there as rapidly as we possibly can.

I doubt if you can appreciate the great business in which we are engaged unless you visit the city of Washington. Last week a call was issued by the president of the National Council of Defense, requesting the presence of the presidents of the State Councils—Medical Section. We discussed the question of inducing 5,000 men to enter the army and 1,000 to enter the navy as rapidly as possible. This call was issued independently of the call issued by the American Medical Association, and these two efforts are working side by side. The Council of National Defense works side by side, with the Surgeon-General. A great many departments organized by the former are taken over by the latter.

When you ride around the city of Washington and see the large number of structures for housing this great war, you realize we are up against a serious business. A large part of that park known as the Mall is given over to office buildings. Beautiful trees have been cut down to make room for these offices. In front of the Lincoln Memorial the whole space is covered with office buildings. The same is true of the horse show ground.

In discussing the best ways and means of increasing the Medical Reserve Corps, many suggestions were made. The draft was first mentioned. This was scorned. The Surgeon-General said he had every confidence in the loyalty and patriotism of Americans, and he felt there would be no difficulty in getting the required number. So the draft is not considered at the present time; perhaps it won't be. In my mind there is no difficulty in finding men of suitable age and circumstances to enable them to become members of the Medical Reserve Corps, and I am sure they will respond in the most hearty way. It has been said those who do not respond will regret it to the end of their days.

I have had some experience with these soldiers who want to volunteer, and the mothers who come with their sons, saying they are physical wrecks. I recall one instance in which the son was about six feet tall, and a perfect Apollo in form. She declared him a weakling. She wished me to make a thorough examination, and she was sure I would find it all true.

The boy replied, "Mother, you had better go into the hall."

The mother retired. No sooner was the door closed, than he stepped up to me and said, "Doctor, there isn't a damned thing wrong with me." (Laughter).

When the mother returned, she said, "Doctor, you found just exactly what I said; didn't you?"

"Madam, I am glad to be able to say to you you have one of the finest specimens of physical manhood I have ever seen."

Tears came into her eyes.

I said, "Suppose your son was a coward?"

The tears dried, and she said, "I will not say another word, but will insist upon his going."

The feeling you will have if you don't go is something we must all consider. It is easier to go than to be a slacker. As time goes on, the inner drive grows stronger and more powerful. Those of us beyond the age limit regret we are not twenty years younger.

The medical profession does the real philanthropic work. They repair what has been destroyed by the regular army. We try to send back to their places the human wrecks brought to every hospital. The work is not easy when you get onto the other side.

I listened to a number of speeches at Washington last week. One of the men told some of his experiences. He said: "We worked twelve hours and then we decided to work another twelve hours. Sometimes we steal away and sleep as much as three hours, and then go to work again. Sometimes for a distance of half a mile surrounding the hospital, the ground is covered with litters—men lying upon the ground waiting to be treated." So they work on. He was as full of enthusiasm as a man could be. He said, "As soon as I recover I will return to the front to the same work in which I have been engaged for about a year."

A ray of hope has dawned for us older men. The Veterans' Medical Service Corps has been made for us. It admits men over fifty-five, and men who have been disqualified for physical disability. It has been recognized there are a few of us who still know a little about surgery; that they will need us in various camps or hospitals; therefore they have opened up a gateway for the older men, so that every physician will be engaged in army service. I would like to say to the medical ladies they will be admitted, too, upon the same terms with the men. (Applause).

Circulars will be sent out to you very shortly from the Surgeon-General's office, with blanks to be filled out telling your history and standing in the community, and you will receive admission to this new organization. I, for one, am glad they will take us older members. It is one thing to talk and wave flags and call bad names; but the thing that counts is honest war work, when there is so much to do. (Applause) .

I never was more proud in my life that I am a member of the medical profession; that we are the good Samaritans; that we relieve aches and pains and restore these shattered specimens of humanity and bring them back to our homes; or send them back to the front, if need be. (Applause).

Toastmaster: This concludes the session for this year. I hope all of you not in the army or navy service next year at this time will return. I think it is very important to maintain the active organization of the state society, if for no other purpose, for its usefulness in this war. I hope each one still at home—and many will not be—will make a special effort to come to the meeting. (Applause).

## Precancerous Conditions of the Breast.*

Michael G. Wohl, M. D., Omaha.

From the Pathological Dept. Nicholas Senn Hospital

I have chosen this subject for two reasons, first the frequency with which the practitioner sees these cases and secondly the importance of a correct diagnosis.

During the past six years of our service in various hospitals there has come under our observation specimens of breasts amputated by the surgeon for the reason that he supposed of the existence of so-called precancerous condition, which, however, upon microscopical examination proved to be benign. On the other hand, we examined breast tissue clinically diagnosed as benign which histologically proved malignant. We do not stand alone in such experience. McCarthy (Surgery, Gynocology, and Obstetrics, December, 1917), states that in their laboratory they were able to pick out twenty-two percent of carcinomata of the breast that the clinician and surgeon had diagnosed benign or doubtful. Such errors from a clinical standpoint may be justifiable, considering the complexity of the pathology of the breast; yet we are not doing the most for our patients when they are not given the benefit of pathological examination of the tissue. Let me urge upon you, however, not to neglect the gross appearance of the diseased tissue. The surgeon is not always in a position to have a pathologist present at the operation and if he acquires the habit of studying the gross appearance of the tissue he will become sufficiently skillful in pathologic anatomy to be able in a high percent of cases to recognize cancer tissue when he sees it.

The examination of the suspicious tissue by a frozen section during the operation is to be encouraged. It takes only a short time and the microscopical appearance in conjunction with the gross picture of the tissue plus the history of the case will enable one to form an opinion as to whether to advise a simple excision of tissue, amputation of breast, or a radical.

The frozen section is in our estimation very satisfactory for rapid clinical work. In borderline cases fixed celloidin or paraffin sections have not given us any more information than frozen sections. Where a frozen section cannot be utilized we believe the suspicious tissue should be excised for immediate future diagnosis and then proper surgical treatment instituted. Our experience does not bear out the supposition that cutting out the tumor from which a section is made and waiting twelve to twenty-four hours for a microscopic diagnosis is always followed by more rapid growth and dissemination of tumor in case it proves malignant.

For practical purposes a lump in the breast can be grouped either as:

1. Benign tumor (Fibroadenoma).

2. Cystic disease: benign or malignant form.

3. Carcinoma.

The fibroadenomata are usually single and their distinguishing feature is a well formed capsule that separates them from the surrounding healthy tissue, a feature that the other two conditions as a rule lack. Among fifty-four breast tumors that came within the last five years to the laboratory of the Nicholas Senn Hospital there were four of this type, or seven percent. McFarland (The Breast, Anomalies, Diseases and Treatment, Deaver and McFarland) found the incidence of these tumors to be 12.17 percent. The fibroadenomata do not metastasize nor recur.

However, if left alone the tumor may undergo malignant transformation. I recall a case that came to our study at the Samaritan Hospital, Philadelphia, of a woman seventy-two years of age in whom a tumor in the breast that was diagnosed as benign remained unchanged for ten years, but within the last two years took on active growth. The tumor was then removed by Dr. Babcock and it proved to be sarcoma with areas of typical fibroadenomatous changes. (Drs. Babcock and Wohl, Proceedings of the Pathological Society of Philadelphia, 1915). In connection with this I would like to call your attention to the occurrence of tumors in isolated mammary tissue that probably becomes sequested during embryonal life. These tumors are usually encapsulated and have no demonstrable connection with the breast. Their apparent capsule, however, does not

(Continued on page 155)

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

THE NEBRASKA STATE MEDICAL JOURNAL
Published monthly by The Nebraska State Medical Association.

Irving S. Cutter, Editor..........Omaha
A. F. Tyler, Associate Editor..........Omaha
J. M. Aikin, Business Manager..........Omaha
Room 468 Brandeis Building.

Publication Board.
F. A. Long, Chairman..........Madison
W. O. Bridges..........Omaha
B. F. Bailey..........Lincoln
J. M. Aikin, Ex-Officio..........Omaha

Subscription $2.00 Per Year. Single Copies 20c Each

Address all communications to J. M. Aikin Business Manager, 468 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. III. May, 1918. No. 5

## The Famine of Doctors.

Need of Better Classification to Conserve the Supply.
New York Evening Post.

During the first months of the war people used to joke about the idea that nobody could any longer afford to be sick because all the doctors had gone to France with the army. But this seeming absurdity threatens now to become grim fact unless some sort of sane system for controlling enrollment into our medical reserve is evolved. At least 10,000 have been enrolled by the government; many of them have already gone abroad; others are sailing as fast as ship room can be found for them. These men volunteered indiscriminately from all parts of the country. It mattered not whether a man was an expert of renown, a professor in a medical college or an ordinary practitioner, whether the town he lived in had been stripped bare already and he happened to be the last physician in his countryside. He was eagerly accepted and sent abroad. It is said that men of the highest value as experts, men worth whole divisions, are doing ordinary surgeon's work on the French front, in daily danger of German bullets. Surely here is no sensible sort of procedure.

What the country needs is a plan according to which physicians shall be classified when they offer their services to the army. There appear to be enough physicians in the country to meet both military and civilian demands. Naturally, our fighting forces come first. Were there not enough doctors to go around, those of us who stay at home would have to dispense with medical attendance altogether. But there are enough. It takes about seven to care for every 1,000 soldiers. We have approximately 70,000 practitioners in the country under the age of 55, the limit for active service. In other words, we have about enough doctors to meet the needs of an army of 10,000,000. But, with only 3,000,000 soldiers in sight, less than 24,000 of the available 70,000 will be required for the present, leaving fully 46,000 to look after civilian needs. These civilian needs fall into three categories, medical instruction, public health service and private practice. As Surgeon General Blue recently said, for the protection of future generations we must provide our colleges with good teachers, so that their graduates may be of high standard. Neither can we permit the public health to be endangered by depletion of the personnel of health departments and hospitals. And finally, people must not be deprived of ordinary medical attention from the "family doctor." Any plan evolved will have to take all these facts into consideration.

Probably a medical map of the whole country, showing the distribution of doctors at the present time, will have to be made. Then, at a glance, the enrolling officer will be able to tell whether a volunteer comes from some district already stripped bare or whether he comes from a city like New York, which for various reasons is, comparatively speaking, oversupplied. No doctor should be taken if the neighborhood he has been practicing in needs his services. Similarly, no professor of a medical college should be accepted unless it can be shown that his particular abilities are indispensable to the army's welfare. In the same way rigid inquiry must be made to discover whether an applicant is not much more valuable to the community in the civilian position he already occupies than he would be as part of the military forces. His special abilities should not be wasted by assigning him to duties that could be performed as well by the average physician. And, above all, the lives of our great specialists must not be risked in routine work.

In this matter of enrolling physicians for the army there has doubtless been a lack of planning and forethought similar to that which was responsible last year for the attempt to conscript our medical students. The fault probably must be laid at the door of the medical societies which have not taken up the subject with sufficient energy. Individuals were, meanwhile, drawn to enlist even when they knew that their usefulness would be greater at home in a civilian capacity than abroad in an American uniform. Now, however, a real movement seems on foot to correct the grave mistake that has been made, and to correct it before irreparable injury can result. In the near future the surgeon-general will probably call a conference at Washington of prominent medical men, when the entire subject will be thoroughly threshed out. Civilian physicians are going to be consulted in the solution of this problem, just as civilian experts were called in to help the government in other fields. And, no doubt, a satisfactory, workable plan covering our military needs, and at the same time providing protection for the civilian population, will be evolved.

---

## Officers Nebraska State Medical Association for 1918.

| | |
|---|---|
| Col. J. M. Banister, Omaha | Pres. Elect. |
| W. F. Buckley, Beatrice | Vice President |
| A. I. McKinnon, Lincoln | Vice President |
| Joseph M. Aikin, Omaha | Sec'y.-Treas. |
| Wm. P. Wherry, Omaha | Librarian |
| 1st Councilor Dist. | A. F. Tyler, Omaha |
| 2nd Councilor Dist. | E. S. Wenger, Lincoln |
| 3rd Councilor Dist. | R. W. Fouts, Dawson |
| 4th Councilor Dist. | A. E. Cook, Randolph |
| 5th Councilor Dist. | Morris Nielsen, Blair |
| 6th Councilor Dist. | Frank Thonkolin, Wahoo |
| 7th Councilor Dist. | J. G. W. Westerhoff, Carleton |
| 8th Councilor Dist. | None Named |
| 9th Councilor Dist. | G. I. Sellon, Broken Bow |
| 10th Councilor Dist. | N. T. Johnson, Upland |
| 11th Councilor Dist. | Not Named |
| 12th Councilor Dist. | Not Named |

---

With this issue of the Nebraska State Medical Journal, the present editor retires. The editorial supervision passes to Dr. A. F. Tyler of Omaha who, as associate editor, has rendered able and expert assistance.

The editor desires to express his great appreciation to all who have assisted in the beginnings of our State Journal. The profession has been most responsive and the Journal has found a real place on the reading tables of our membership.

The retiring editor bespeaks, on the part of the profession, the highest type of cooperation with Dr. Tyler. After all, the Journal is and will be what you help make it.

---

### Precancerous Condition of the Breast.

(Continued from page 153)

exlude them from being malignant. This fact was impressed upon us recently by the following case:

Mrs. H, age 49. Discovered a tumor accidentally in the upper region of chest. She had no pain. Upon examination there was a nodule about the size of a large navy bean located midway between the inner margin of the breast and sterno clavicular articulation. The tumor was movable beneath the skin and had the clinical appearance of fibroadenoma. Upon removal the tumor was fairly well encapsulated and presented a variegated appearance. The microscopical examination of the tissue revealed the picture of typical scirrhous carcinoma of the breast. Believing that the tumor might be metastatic to carcinoma of breast a radical was done. However, after thorough examination of the mamma and axillary glands no cancerous changes could be detected.

The second class of cases, or the so-called chronic cystic mastitis, has been the bete noir of both surgeon and pathologist. Among a dozen or more names by which the condition is designated the terminology of Chronic Cystic Mastitis, (Koenig—Centralblatt f. Chir. 1893, 49), or Abnormal Involution, (Warren—Journal American Medical Association, 1905, XLV, 160), or Senile Atypical Parenchymatous Hypertrophy, (Bloodgood, Surgery, Gynocology and Obstetrics, 1906, III, 721), is most commonly employed in this country.

This condition is seen most frequently in women at the cancer age and is associated at times with carcinoma. Because of these facts and its diverse microscopical picture it has been looked upon as a precancerous condition. A clear conception of this disease is of paramount importance since upon it depends whether the surgeon will excise the diseased tissue only or amputate the breast or do a radical with removal of the axillary glands.

Out of fifty-four breast cases studied by us it occurred twenty-four times. In this group we have not included the cases of carcinoma (six out of twenty-two) that showed changes of cystic disease for the reason that it was impossible for us to demonstrate in section after section that abnormal involution was the primary lesion. We are rather of the opinion that the cancerous process in the six cases was primary and the changes characterized as abnormal involution are secondary since they are most marked in the vicinity of the carcinomatous areas.

The average age was 40.3 years. The youngest case being twenty-seven and the oldest sixty-three. As to social status of the patients of this series, it occurred in equal numbers in married and unmarried. Rodman (Diseases of the Breast, Blackiston's, 1908) says that "elderly maidens, married women who are sterile and mothers who have not nursed their young are most often afflicted." A point of some importance is that carcinoma in our cases was more frequent in the unmarried than married, contrary to text book teaching. This is likewise born out by the statistical conclusions presented by the British registrar, who found that at length of the reproductive period more married women are affected than unmarried, but after forty the unmarried much more predominate. Calculating the percentage of each group the predominance is altogether on the side of the unmarried (Journal American Medical Association, March 30, 1918, p. 967).

The great majority of the cases of cystic mastitis discovered the tumor accidentally. Pain, or as the patient expresses it, "an ache in the breast," was complained of by a small minority. Retraction of the nipple was not mentioned in the histories of our cases. A discharge from the nipple of a fluid, serous, milky or bloody character though said to occur has not been noted in our cases. Upon physical examination one may find one or two fairly well circumscribed tumors which upon palpation is impossible to tell whether they are solid or cystic since they are under high tension, or one may feel multiple small nodules.

An enlargement of the axillary lymph glands does not necessarily mean malignancy. We have noted on several occasions of cystic mastitis enlarged axillary lymph nodes, the enlargement being due to endothelial hyperplasia. In a small number of our cases of carcinoma the enlargement of the axillary lymph nodes was likewise of inflammatory rather than malignant nature.

The most characteristic picture of the condition is presented upon section of the diseased tissue. The breast shows cysts of different sizes, varying from the size of a pea to that of a hazel nut or larger. The walls of the cysts are smooth and filled with either a dark straw or light chocolate colored fluid. At times one sees one or two larger cysts the contents of which are usually straw colored. This latter type is a benign condition for which simple excision of the cyst or diseased tissue is sufficient. (Fig. I). How-

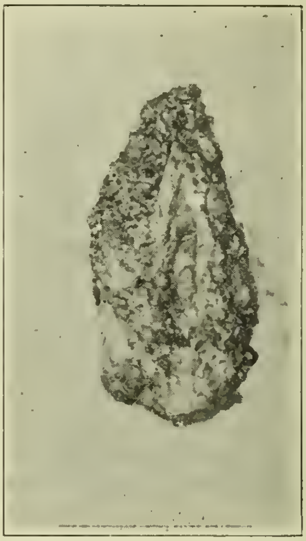


Fig. I. Gross appearance of cystic disease of breast. Note the smooth walls of the cyst.

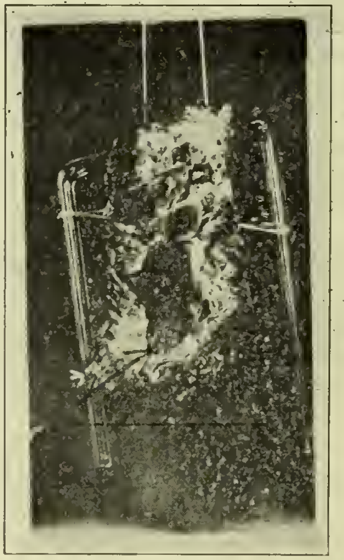


Fig. II. Gross appearance of cancer cyst. Note the nodule inside the cyst.

ever, it must be differentiated from the malignant form, the cancer cyst. In our collection there are three cases of cancer cyst. In two of them the cysts were smooth walled and had a benign appearance except the implantation of a small nodule upon their walls.

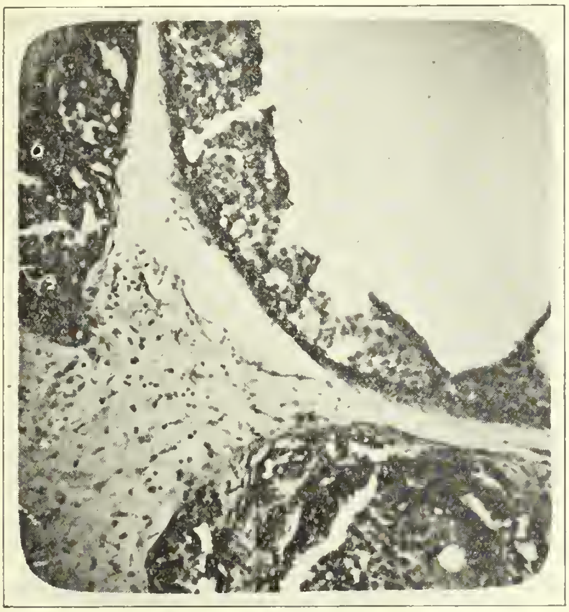


Fig. III. Section from wall of cancer cyst.

The contents of the cyst were distinctly bloody. The microscopical examination proved them to be malignant. The third case had dark colored contents, the walls were apparently smooth except thickened, a section from the thickened wall of the cyst showed its malignant nature. Clinically all three were diagnosed benign. (Figs. II & III).

By far the larger class of cases are those with multiple cysts which show histologically a rather diverse picture. The main feature of all being a dilatation of alveoli forming cysts. The cysts also result from coalescence of closely connected alveoli. The lining of the cysts consists of a single layer of cuboidal cells. When the cyst reaches a certain size the epithelial lining disappears. In the smaller cysts there is a proliferation of the epithelial lining which is heaped up and in some almost completely fill up the lumina of the cysts. The cells that fill the lumina are rather large, pale, having vesicular nuclei, the so called "Blasse Epithelium." (Fig. IV & V). These cells have been looked upon as true or as forerunners of carcinoma cells, but as McFarland, (The Breast Anomalies, Diseases and Treatment, Deaver and McFarland, p. 278), has pointed out they differ from carcinoma cells in that the latter have less cytoplasm, larger and darker staining nuclei. These cells are frequently found in breasts of children, sweat glands and fibroepithelial tumors (Kuru, quoted by McFarland). The periductal connective may show hypertrophic changes compressing the lobules of the breast. Within the periductal tissue one often finds lympho-cystic infiltration. This latter form of chronic cystic mastitis may be associated with carcinoma. In our cases it occurred six times in twenty-two cancers of breast, or 27%.

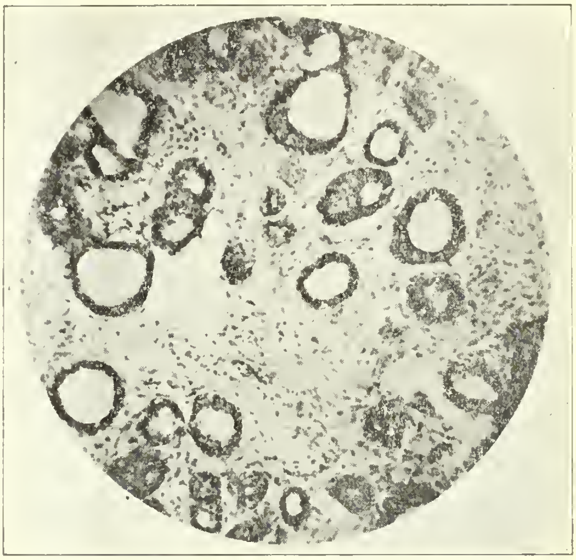


Fig. IV. Section from tumor of breast showing multiple cysts.

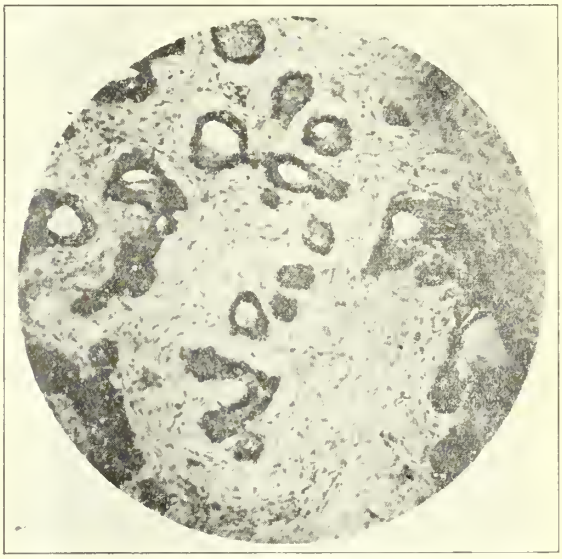


Fig. V. Section from cystic disease of breast showing epithelial proliferation with filling up of lumina of cysts.

The association of chronic mastitis with carcinoma as reported in the literature varies from 10% (Greenough & Hartwell, Journal Medical Research, 1909), to 70% (McCarthy Collected Papers of the Mayo Clinic, 1915, 7, 903-919). However, their occurrence is not constant. It seems to us that the relationship between carcinoma and chronic cystic mastitis has been over emphasized. Nobody has ever demonstrated the actual transformation of chronic mastitis into carcinoma, and again one sees the picture of chronic cystic mastitis in tuberculosis of the breast and squamous cells carcinoma (McFarland), which could point that the condition is secondary rather than primary. (Fig. VI).

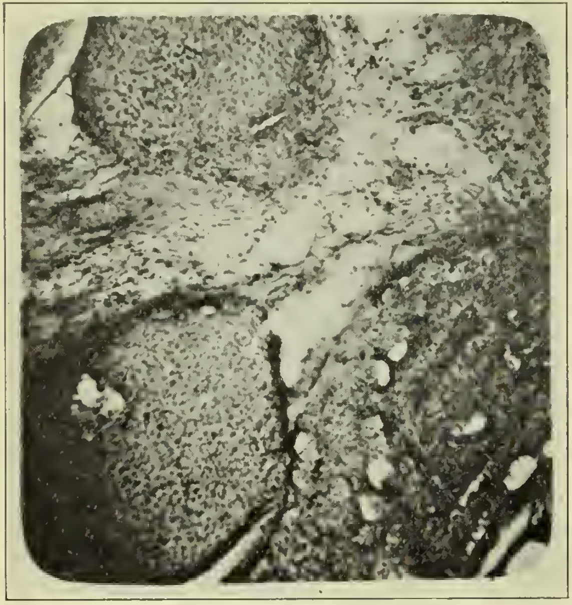


Fig. VI. Section from tumor of breast showing marked proliferation of epithelium undergoing malignant changes.

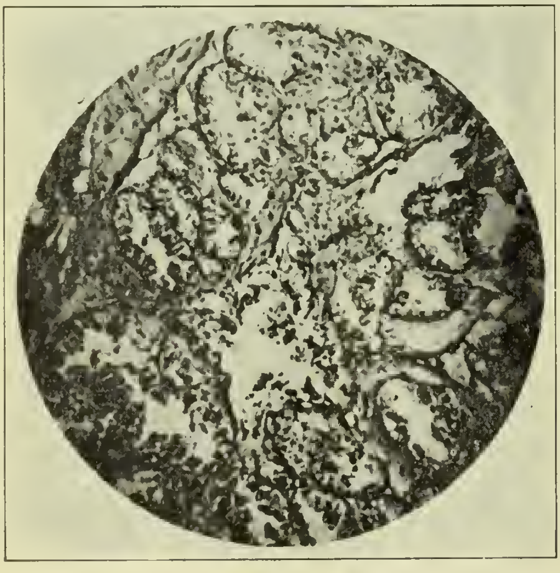


Fig. VII. Section from benign intracystic papilloma of breast.

We agree with Hillkowitz (Colorado Medicine, July, 1917) that carcinoma does not occur much more frequently in a breast that is the subject of chronic cystic mastitis than in a normal breast. If the surgeon will realize this we believe that less radical operations will be performed for this disease.

## Tuberculosis in Children.*

Floyd Clarke, M. D., Omaha.

The importance of tuberculosis in children can hardly be overemphasized, when one realizes that about one-fourth of all children give evidence of tuberculous infection.

There is a distinct difference between infection and disease. Especially is this true when considering tuberculosis. An infection with tuberculosis would simply indicate that the tubercle bacillus had gained entrance into the body. Foci of infection have been established at the site of entrance, but the child may be resisting this infection and building up an immunity which may prevent tuberculous disease. Tuberculous disease means a more serious invasion of the tubercle bacillus with considerable more breaking down of tissue, and the natural immunity against the disease has to a varying degree been overcome. It is possible for one to presume that many children are better off because of having become infected with tuberculosis, and thus established an immunity early in life.

When infection occurs, the individual begins to build up a certain specific immunity against tuberculosis. The body is able to destroy a few tubercle bacilli. The products of the destroyed bodies together with other products from the focus of infection, are the beginnings of an immunity. In adult life, this immunity is further established by the individual cell taking the function of producing certain immunizing substances. Children, and especially infants, are much more susceptible to tuberculous disease than adults, because of their inability to draw upon the immunity which the adult cell has already established.

In infancy, tuberculosis is of course a very serious affection, and a fatal termination is to be expected. After the age of two years and from then to about eight years, the natural tendency of tuberculous foci is to heal.

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

A parasite has a definite life cycle: (1) it must enter the body, (2) must multiply and produce numerous progeny, (3) must escape from the host, (4) must find its way to another host, there pursuing the same life cycle. In order to meet these changes in its life cycle, a parasite must be able to adapt itself to the host which it inhabits. As soon as received by the host, each parasite is forced to adjust itself to the immunity which that individual possesses against the parasite it lodges. Bacteria, and especially tubercle bacilli, retain to a considerable degree these properties of a parasite.

Infection with the bovine bacillus does occur. However, in this country, bovine bacillus infection is conspicuous by its rarity. Pottenger suggests that while bovine infection does occur in infancy, the lesions either become non-virulent or heal. He also ventures the opinion that it is quite possible that the bovine bacilli adapt themselves to the human soil in which they find themselves, and finally become human in type because of such adaptation. The more general use of pasteurized or boiled milk has no doubt contributed, in no small degree, to the decrease of bovine tuberculosis in America. In Edinburgh, bovine tuberculosis is found much more frequently than in this country. Edinburgh uses cow's milk without boiling or pasteurizing.

The route of infection has been, and still is of great interest to investigators. It would seem natural to presume that there should be a lesion at the point of entrance of the tubercle bacillus into the lung. Probably the majority of pathologists working along this line, believe that there is always present a primary focus, called the primary focus of Ghon. This can usually be found if carefully searched for. With the acceptance of this view, several points remain unexplained. For instance, why should the primary focus remain so small and usually heal, and at a later time the lung may become the seat of an active tuberculosis. If one discards the lymph glands as the chief route of infection, why should they be found so large at autopsy, and the so-called primary focus so small as to require most careful search.

One of the chief characteristics of tuberculosis in children is the marked involvement of the regional lymphatic nodes. If the child is not overcome by the disease, these lymph nodes tend to decrease in size as age advances.

Numerous investigators have been interested in endeavoring to establish the fact, that the tuberculosis of adults is simply a waking up of the process which had its beginning in childhood. Eugene L. Opie in reporting a rather large series of autopsies on both children and adults, divides tuberculosis into two general groups. (1) Lesions occupying the apices of the lungs, spreading through the tissue of the apex and not accompanied by caseation or calcification of the regional lymph nodes. This represents the type usually found in adults afflicted with pulmonary tuberculosis. (2) This group consists of lesions distributed throughout any part of the lung. They are not at all confined to the apices of either lung. They are circumscribed and are accompanied by caseous or calcified lesions of the regional lymph nodes. This type usually has its beginning in early childhood, and is called focal tuberculosis. In this series of autopsies, he apparently establishes the fact that the apical tuberculosis of adults has no relation to, nor is it caused by the focal tuberculosis occurring in childhood. At present it can be said that sufficient proof is lacking that the tuberculosis of adults has its origin in childhood.

The activity of tuberculosis will depend on a great many factors. If a child has received a great number of tubercle bacilli into its lungs, pulmonary tuberculosis is apt to supervene. A smaller number of tubercle bacilli may become healed, and assist the child in developing a certain degree of immunity which will assist him in later life.

The nursing infant of a tuberculous mother is extremely liable to develop tuberculosis. La Fetra in an analysis of seventy-three cases, of pulmonary tuberculosis in children under twelve months, traced the source of infection to a tuberculous parent in over 40 per cent of the cases. The milk of tuberculous mothers does not contain tubercle bacilli, and probably no tuberculin toxins, but children do become infected from the mother because of the necessarily intimate contact with them, or with other members of the household who have tuberculosis.

D'Espines sign was for a time thought to be diagnostic of tuberculosis in children. This sign consists in the transmission of the whispered voice sounds below the seventh cervical vertebra. Positive evidence of this sign simply means enlargement of the tracheo-bronchial glands, and no conclusions can be drawn whether or not they are tuberculous.

Miliary tuberculosis can only be diagnosed by the X-ray. Occasionally the Von Pirquet reaction is positive at some time during the disease. The possibility of tuberculous infection should always be taken into consideration in the instance of the thin child, the child who does not grow or fails to gain in weight. Physical findings may be entirely negative. A positive Von Pirquet and X-ray may be the only evidence of tuberculous infection. Just how active this infection may be, and whether or not actual disease is present will depend on the presence or absence of cough, fever, malaise and the train of symptoms incident to tuberculin absorption. Night sweats are not a common symptom in tuberculous infection in children. We all have been confronted with the difficulty of determining whether a given case was an active or inactive tuberculosis. Laboratory workers have been investigating along this line. In a recent article by Major Chas. F. Craig of the U. S. army, appearing in the Journal of the American Medical Association, Dr. Craig states that a positive reaction to the complement fixation test means an active tuberculosis. I do not know of any work having been done along this line in children.

In spite of the great amount of work which has been done on tuberculosis, and the forward strides which have been made toward clearing up many problems, work must still be done and further clarification is necessary. Tuberculosis in children is extremely interesting and vital and new problems of thought and research are constantly presenting themselves.

References.

Tuberculosis, Pottenger, Vol. I, p 94.

American Journal Diseases of Children: H. L. Coit, 1916, p 124; C. H. Dunn, 1916, p 87; Pottenger, Vol. 11, p 125.

St. Paul Medical Journal, July, 1916. J. P. Sedgwick.

Boston Medical and Surgical Journal: J. L. Morse, Vol. 173, p 654.

Journal American Medical Association: Theo. Smith, Vol. 68, p 669; Major Chas. F. Craig, p 776.

N. Y. Medical Journal: Vol. 105, p 777. W. H. Park.

British Medical and Surgical Journal: Vol. 177, p 141.

Journal Experimental Medicine: July and August, 1917. Eugene L. Opie.

Edinburgh Medical Journal: July, Vol. 18, p 178.

Pennsylvania Medical Journal: Sept. 1917, Oskar Klotz.

---

## Changes Necessary to the Future Practice of Medicine.*

C. A. Roeder, M. D., Omaha.

Oncoming events may be casting their shadows before them as one hears frequently that many changes in all vocations will follow this war. The social, economic and cooperative spirit of our profession has always been, and is today, so loose-jointed, inefficient and unorganized that we will be one of the first requiring a most radical change. We will be facing many serious problems from within as well as without, and above all will be required to make a choice between individualism and limited socialism with the odds greatly in favor of the latter. This very problem has confronted all forms of life upon this earth since its origin, but more than ever today we are faced by the necessity of closer cooperation, more efficiency and less conflict. There is far too much conflict among us and conflicts of all degrees are wasteful, always adding detriment to progress, and it behooves us to recognize this as our greatest foe. We all know that proper organization for defense is the only preventive for attack from without and within, which means a potential force for the benefit of all. Our greatest need is scientific specialization with cooperation, if we desire to add strength in general to our profession. Living in an unlimited democracy and having it recently tested as to efficiency and strength from aggression from without and within, one cannot help but feel that a limited instead of an unlimited form of democracy will be the government of the future. Our profession socially and economically represents the latter and to save it from attack, needs a governing force which it lacks entirely at present. Unlimited democracies of all forms breed weak as well as strong individuals, the latter intolerant of themselves and free to persecute the former, who in turn, in many instances are forced to adopt dishonest methods which are as detrimental to the profession as the conduct of their stronger brethren. When we lay more stress on training along utilitarian lines and less on mere education, we will have accomplished considerable toward a solution of this problem. There's a vast difference between a well trained and a well educated individual, the former because of more utilitarian ideals assumed a more proper attitude toward society, and demands a governing force of set standards around which to work, which not only benefits society but the individual as well.

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

Preparedness is the slogan today, and shall it come too late to the profession? To whom would you go if you were attacked unfairly from within or without? If some grave menace threatened the profession today, who would defend us? Is it because of this lack of an organized governing and protecting force that a few able men among us have taken up secret fee-splitting or adopted other unfair means of attracting the public because they know such methods were being practiced by a large percentage of the profession uncontested? Would not nearly all the men practicing these unfair methods be willing to give them up providing they knew it would be stamped out entirely? We have never displayed any effort of self-government by controlling the intolerant in our societies, hence the unrestrained conduct of many members. Proper organization requires government and many are loathe to dispose of their individualism for the benefit of the group or society, which, they are unaware of, would in turn benefit the individual. We have got to come to this as science destroys individualism as it advances, and as no one decries its advance our path lies clearly before us. Can a body of men profess to be altruistic and ethical when a large percentage divide their fees among colleagues, taxicab drivers, railroad conductors and even clergymen unbeknown to their patients? Outside of any ethical aspect can this add efficiency to the society or the individual guilty of such methods? Are we in a position to stop it or should we desire it stopped? Should all men be free to do as they please, or should they all follow a limited course whereby they can openly be governed, and in turn be able to defend and prove that their methods are more efficient? Besides this grave difference of opinion in our midst, we are soon to be confronted by an increase of at least 100% of operators after this war with a relative decreased demand for our services owing to millions of men better trained than ever before in hygiene and cooperation, with an improved aspect on life. Lack of hygiene is the greatest source of all medical ills, and when it permeates the rural districts where 75% of our surgical work comes from, the present law of supply and demand will be greatly altered. The large practices enjoyed by a few today will be dispersed among many tomorrow with lower fees and more charity, which means the oncoming surgeons on the average bid fair to be far less skillful than the masters we have with us today. Industrial medicine is a necessity, and having arrived and proven so efficient through team work, will gradually spread until possibly state medicine may usurp all private practice. The slight influence we have over the legislature for the benefit of the public and ourselves, is most noticeable, and our lack of sufficient rank in the army signifies plainly in what esteem we are held by our defensive forces. The press has never even become acquainted with us, thus accounting for the printed matter in their columns which is so detrimental to medicine as a whole. The press should be taught to know who is who among us, what sort of an article to publish and to have pointed out to them our smooth but unfair advertisers. They are the most willing organization on earth to learn anything of value, and would welcome instruction along such lines. Our own state board supposedly representing us is influenced too much by politicians, as is also the board of health. We still carry a cloak of mystery, presenting no standards of efficiency, which should answer that daily question of why an outsider went to doctor so and so. He arrived in town, but not knowing where to go for expert treatment, nor having any proper way of finding out, he asked the first person he came to. Meanwhile the struggle goes on within our ranks between wisdom and cunning, with the advantage with the latter, and we are grouped, but grouped in so-called camps solely for protection from each other—a tremendous waste of efficiency.

We have tried for a century or more to hold ourselves together on what is called ethics, and have asked the public to believe that we are entirely altruistic. The term ethics no one has ever been able to define satisfactorily. Good examples set up and practiced on occasion by unselfish and sportsmanlike men, were accepted as ethical and adopted as a standard for society as a whole. These examples must be agreeable to every one, and to practice them perfectly requires an abundance of character and good will. Being human we are all looking out for ourselves and striving to secure our own happiness and a discontent amid unsatisfied wants might easily bring on a temptation to a transgression of duty. As long as our ideas vary as to what constitutes happiness, and they always shall, our ideas of ethics will vary accordingly, but if duty ever overshadows our inclinations, we shall have some standard around which to practice. If we were solely altruistic and practiced only for the benefit of the patient with no glory or monetary reward, ethics would be very simple. But in the present and future day practice, ethical procedures will depend entirely on how good a sportsman the practitioner is, which in turn depends largely on his training, and if he professes ethics, he loses patients as cheerfully as he acquires them, and all his methods are so conducted that a minute inspection is always welcome. Besides, he will possess a spirit to do all in his power to promote the welfare of all society as a whole. The general trend of all forms of modern society is along more businesslike methods, which is permeating the ranks of medicine, and people as a whole are truthful from duty or an apprehension of injurious consequences. If our present unorganized state persists, neither duty nor injurious consequences will be left to stimulate the wavering toward more honest procedures; nor will they be imbibed with the idea that their services to the public have a moral worth directly proportional as it originates from duty. Our present ideas and practice of ethics simulates unlimited democracy, and from an efficiency standpoint and a binding force is an absolute failure.

Our mutual antagonisms will always keep pace with the advance of our work, as medicine is far from a science which prevents our views, thoughts and procedures to agree, which in turn is quite essential for progress. We must learn to disagree with a more cooperative and scientific spirit, and our ideas should be to excel our competitor and not to kill him.

Following this war we may have enough of wholesale murder and conflict, and revert to a more peaceful, but more scientific mode of living, as a peaceful life will be held in greater esteem than ever before. The huge armies returning home will have something to say, and as they will be trained along cooperative and efficient lines, we must look for a different attitude from the public. The consideration of life will be crystalized to scientific principles in every particular, and the sacramental symbols of faith and philosophy will pass toward the back ground. With these will go the medical faith elicitor who derives all his practice from a personality camouflaged with shrewdness. What a welcome catharsis this will prove if only in the path of this physic all unfair and secret methods are swept away. With stronger mentalities and physiques, with all these soldiers return to the present and past practices of individualism, religious practice and secret and unfair methods? I hope not, as the war will have failed in imbibing a better spirit toward mankind. They surely will have imbibed some of the wisdom handed down from the ages, and crystalized more than ever from this great conflict, and as they will have fought for a principle, and having gained it, will extend their ideas into all walks of life.

We are going rapidly over the divide from an empirical past to a scientific future, but are in no condition to conduct ourselves economically or scientifically to the extent demanded of us. We have gradually accumulated a wealth of clinical and scientific discoveries far beyond our ability to apply them in our unorganized state to the great variety of disordered constitutions confronting us. Our individualism is the cause, and I dare say most all of us know it. How frequently we hear the remark, "We should organize a team." Large teams are very difficult to keep from friction owing to individualism, and unfortunately for the public there are no more Mayos, but smaller ones, specializing and interchanging may be the solution of this most difficult problem. The new pathology of physiological chemistry and early abnormal physiology has taken the place of the old dead house terminal morbidity and the laboratory has not only come to stay, but is indispensible. It is worse than useless unless highly efficient, but as such, opens a tremendous field which requires cooperation from all specialties. As science destroys individualism it brings on a standardization of effort and instead of thousands of laboratories in this country, we should have one with subdivisions, although independent, scattered here and there, all using a standard scale. We could then discern the difference between a little medicine, a little pus and a marked Wasserman reaction. If we are to free ourselves from foreign superiority in medical sciences, we need radical changes in our education and training of the oncoming younger men. Merely saying we are superior to any nation proves nothing.

Every member of this society receives the benefit of this organization, and owes it considerable in return, and if there is any doubt about his indebtedness, he should withdraw his membership immediately. Each member should display a proper attitude toward the other, providing he knows that the other is practicing on lines laid down by this society, and any member who practices methods which he is unable to defend openly before this society, should be challenged by the rest and treated accordingly. Is there one member of our society who will openly declare that he is dishonest with his colleagues and patients, and practices methods contrary to accepted rules? No, there is not one! Then as every one professes to be square, let him prove it and place himself "above board" where he practices openly. The answer that "it is none of the Society's business," means a lack of cooperation and casts suspicion.

The great question comes up as to what is the nature and limits of the power of a society which can be legitimately exercised over its individual members. Rules and rulers should be identified with the profession, drawn up by the profession and practiced by the profession. Philosophically we know that that success discloses faults and infirmities which failure would have concealed from observation, and we all tolerate most willingly a large percentage of faults in each of us, but a definite imperfection should be rigidly adhered to. A tyranny of the majority is not desired and there is a limit to the legitimate interference of collective opinions with individual independence, but to find that limit and maintain it against dishonest procedures is as indispensible to a good condition of human affairs as protection against political despotism. It is not an act harmful to one or two which we must decide upon, but an act that concerns and undermines the society as a whole which should not be tolerated. There should be no attempt to establish a political despot, just a clearing house, and our decisions should not be personal preferences. There is a preponderance among mankind of rational opinions and rational conduct due to a quality of the human mind which is the source of everything respectable in man, hence the outlook is not hopeless. Wrong opinions and practices gradually yield to fact and argument providing there is a way to get at the source of the unfair technic by an unyielding force and no opinion or act contrary to truth can be useful; in fact only harmful. Most people would rather not ruffle the quiet surface of the dishonest depth by introducing new benefits, because the introduction is stormy and new enemies are added to every one's generous list. But the price paid for this intellectual pacification is the sacrifice of the entire moral courage of the profession, and our well being may be measured by the number and gravity of the procedures practiced which have reached the point of being uncontested.

In all forms of organization, it is as essential to be protected from within as without, and in the medical profession there is no protection from either side. We should not protect the dishonest parasite who is a representative of dishonest methods, nor should we be helpless against the assaults of the designing public. We should have a standard and require every member to live up rigidly to it, and those who do not desire to do so should be left alone, but outside of the society. The public will soon find them out and we should promote a keener recognition by them through the conventional but hazy cloak of the medical profession. This state society should be reorganized in some respects, rigid standards set and every one asked to join. Besides reorganization, we should add to our annual dues, an insurance fund of say five dollars devoted entirely to legal affairs, and conducted by honest legal men-lawyers. Their prosecutions should represent the opinions of the society and would protect every member in it. How many splitting fees secretly or practicing other dishonest methods would be most willing to stop if assured that due pressure would be brought to bear on those who would not? Nearly all, I'm sure, as there is a great deal of good in almost all of them. Every one joining a reorganized society with a small annual insurance fee of five dollars would receive far more help and protection than he ever dreamed of. It might be called "Ethical Insurance." This plan would, of course, place the advantage with the men of ability, and as we all think we possess more ability than we really do, our efforts unconsciously would all be with the society. Think of the possibilities of such a plan with its influence over public opinion, and the press, and the power to place proper recognition where and when due. We all sit around in our imaginary case and tolerate a little more each year, knowing that one or a few or committees are unable to rectify the dishonest methods practiced by some members, admitting there is no health or strength in us. We could develop a department in this state society devoted entirely to protection from without, and correction within, supported by a small annual fee of only a few dollars, which would be fearless and unconquerable. Such a department devoting its entire effort to legal matters concerning the profession, would represent the opinion of all its members, which would soon place the profession on a more socialistic scale which is the condition soon to be demanded of us by the public, and if we do not show the initiative, they will.

---

## Address by Major Jump Before the Nebraska State Medical Association, June 8, 1918.

Gentlemen: My chief object in life is "butting in." I have just stopped off here between trains on my way to Ft. Dodge to speak to the Iowa State Medical society. I went up to see Dr. Summers, chairman of the Council of Defense, medical section, and it was suggested I push myself before you. I am very glad of the opportunity to say to you that thing for which I was sent out from Washington—that the Medical Officers' Reserve Corps has become so depleted we have gotten into considerable of a hole. We are discharging and calling into active duty more men every week than we are enrolling. Since I left Washington the Corps has been depleted and we have left about two thousand men who may be called upon. Probably not one-half of these may be called into active service, because they include such men as Dr. Keene, who has just celebrated his eightieth birthday. There are a lot of that sort in the Corps. There is an urgent need of medical men, particularly of surgeons. Not one-half of the men in the Corps are of surgical ability, and we will want probably two-thirds. There is urgent need for fifty internists—men who know only internal medicine. There is need for 200 orthopedic surgeons. The X-ray men tell me they want 600 Roentgenologists for every million of soldiers, and they haven't 600 in the Corps today. We have about 2,000 men in the Corps. General Crowder is about to call out 300,000 new soldiers, which means 8,000 additional doctors. General Gorgas has issued a call for 5,000.

You and I know we are not going to get out with the one and a half million needed this year; it will be three and four and five million, and if furnished to the extent England has, it will be eight or ten million. No one in Washington is talking of peace. Ten million cotton uniforms have been ordered; twenty-one million pairs of shoes; twenty-one million pairs of socks; seven million overcoats—and you know each man needs but one overcoat. That is what Washington thinks about this thing.

Now, why haven't you men gotten in? First, because you haven't adjusted your affairs. Then the statement came out in the Journal of the A. M. A. that we didn't want any more men. It was garbled. You thought there wasn't a place for you. There is now.

In the second place, you haven't understood there was a need and that men like this were called for.

No man can go into the army and make out of it. It is a sacrifice, but it is a sacrifice whether we go or stay at home. Everybody has to sacrifice something from this time on. You don't dare to buy a new automobile or piano, because the men who make those things are needed to make aeroplanes. Don't buy a suit of clothes unless you must, because the men are needed to make uniforms. You must face the horrible state of affairs confronting us. You said you would come when needed. Now is your time! Some of you have been expecting General Gorgas to tap you on the shoulder. He is busy, and sent me. I tap you right now! If you have been bluffing about this thing, I call your bluff. Colonel Banister is here ready to examine you. Now is the time to get in. You must be physically and professionally—yes, and morally—fit. We don't want any men to go into the army to reform them. If you have to study your books before you know what is the matter with your patients, you had better stay at home where your books are handy. You can't take very many of them with you. We want every able-bodied man under fifty-five who can pass the examination, and most of you here today come under that class unless your looks belie you. Before we get done with this thing, we must get every available medical man in the country, and it means one-third of the men in this city. You can't stay at home because you are busy. You are the kind of a man we want, because you have proven your worth.

If you do not respond to the call, make sure you are indispensable, and that your neighbors and professional brothers think you are indispensable. We are all indispensable, if we trust to the statements of some of our patients.

Now you have the privilege of serving your country—not by buying bonds. Leave that to the business man. Not with physical strength—leave that to the soldier; but with your training, which nobody can give but you. The soldier must be kept in health or we lose. Are you going to let your neighbor attend to the medical wants of those soldiers who have shouldered arms to protect your women and children and homes? Are you going to stay at home snug and complacent and be satisfied to let the other fellow do the work? Think it over.

Can any one or you young men, be satisfied to take no part in this war—the greatest epoch the world's history has known? Can you afford to? Even if you can get by with the matter of public opinion, you have a conscience, and you have to sleep with that conscience and live with it day after day and square yourselves with it as to whether you are doing your full duty.

To those who cannot get into the Corps, we have the Volunteer Medical Service Corps, where those of over age, or disability, or members of a hospital, or board of health or college staff may enroll; and we are going to get into that group those men who cannot possibly afford to go into the army. Primary obligations must come first. Remember the woman who bears your name and the children she has borne you. You must support them. Such men will be taken into the V. M. S. C. They are going to be tagged and classified for a possible future emergency. After we have gotten all the available forty or fifty thousand men and we are needing more, then we will be able to use some of these.

In addition, gentlemen, the V. M. S. C. is going to do something else: It is going to draw the line between those who are with us and those who are not. It is going to be very positive and very deep and very significant. On the one side will stand the men in the two corps, wearing the olive drab and the badge of the corps. On the other side are those who wear neither one. There is no neutral position. You are with us or against us. Those against us must be classified with pacifists and pro-Germans. I am perfectly positive that those who can get in and won't get in are going to be so uncomfortable they will not be able to stand it.

Gentlemen, we need you and need you now. Don't wait until next week or month until we have what you might officially call an "immediate need." Come into the Corps.
(Applause).

---

## Report of Officers and Committees.
### State Secretary's Report.

When we convened our 1916 Annual Session, our membership was 1,003. On the corresponding date last year we had 989. On this, our 50th anniversary, the roll shows 1043. On Dec. 31st, 1917, we had enrolled 1056. On Dec. 31st last year we had enrolled 1138. The difference between the enrollment at our annual session and our membership on Dec. 31st represents the decrease from deaths, removals, and lapses for nonpayment of dues. We have steadily grown in numbers and efficiency in county and state association work. We have the handicap of 337 physicians who have been recommended for commissions in our Medical Officers Reserve Corps. That is 17.6 per cent of the total medical population in Nebraska and places us ninth on the list of states. In the entire United States 20% of our profession have volunteered, a large majority of whom are serving in our Army and Navy. Those commissioned and awaiting the call to leave their private practice are busy with the "not eligible for commission" members of our profession who are rendering government service at home. Under these conditions the response to duty by county secretaries "on the job" merits commendation. The wisdom of this House of Delegates in voting "an assessment of four dollars per capita on the membership of the component county societies "as the annual dues of this Association," has been abundantly verified by our membership in their ready payment of dues. The last line of that by-law, designating the date for payment, needs definiteness in wording. The ownership and publication of our official Journal is a potential factor of growing value in adding to our membership, unifying our efforts and equipping us for more efficient service. One factor supporting that statement is the gradually increasing number of county secretaries who are exercising their privilege of publishing news items in our Journal. It would cheer the heart of your state secretary, greatly benefit and encourage the busy county secretaries were some of our Councilors more interested in the performance of their official duties. Another argument for the prestige our Journal brings to this Association is evidenced by the increasing number of inquiries from physicians requesting copies of the Journal and asking how they may gain State Association membership. These increasing medical, social, and fraternal advantages we enjoy, invite a rapidly growing number of inquiries from business houses for sample copies of the Journal, by libraries and individuals who desired completed files, and by state medical officials who are planning to establish their own official Journals. The changes of address made necessary by war conditions necessitate cooperation by the members with your State Secretary, to maintain a fairly accurate mailing list.

Joseph M. Aikin, Secretary.

### Report of Committee on Scientific Work.

Your Committee held two meetings, attended by all of its members. That attendance alone speaks for loyalty to duty when one of our members lives in Beatrice and one in Lincoln. The goal we set was a well balanced grouping of subjects, covering the whole field of medicine. Our major efforts and minor returns, were among the busy yet competent physicians outside of Omaha and Lincoln.

Many conditions have combined to make it particularly difficult for our members to prepare papers and attend our state meeting this year. Your Committee, recognizing the manifold demands calling physicians to government service at home, in addition to added private practice because so many of our most active members have gone into full time government service, offer this program, hoping for your approval, and thanking our membership for cordial support.

If some who desired a place on our program have not been recognized, it was because the purpose of your committee was to "combine the most essential subjects with the men best qualified to enlighten the average doctor on the theme presented." Being fallible, we could not please all, and the same token prevented our securing the presentation of other excellent addresses. One regrettable fact, possible of correction by our membership, is frequent requests for a place on our program, subsequent to the announced date for assorting, arranging and submitting our material to the printer.

Respectfully submitted,
C. A. Roeder,
B. W. Christie,
F. W. Buckley,
J. S. Welch,
Joseph M. Aikin, Chairman.

### Report of Librarian.

Mr. President and Members of the Nebraska State Medical Society:

Herewith I hand you the Librarian's report for the fiscal year, 1917.

| | |
|---|---|
| Money received | $25.00 |
| DISBURSEMENTS. | |
| Bibliographies: | |
| Dr. George W. Covey | $1.00 |
| Dr. Clara McMahon | 1.00 |
| Dr. Plehn | 1.00 |
| Dr. Straight | 1.00 |
| Dr. George W. Covey | 1.00 |
| Dr. Brooks | 1.00 |
| Dr. Harvey | 1.00 |
| | $7.00 |
| Postage | $2.00 |
| | $9.00 |
| Balance on hand | $16.00 |

My check for the balance on hand is enclosed, and I beg to recommend that the usual appropriation of $25.00 be made.

There were received during the year 299 current magazines as listed below:

Colorado Medicine—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Journal of the Indiana State Medical Association—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Ohio State Medical Journal—Jan., Feb., Mar., April, May, June, Aug., Sept., Oct., Nov., Dec.

American Med. Assn. Bulletin Journal—January.

Journal of the Missouri State Med. Assn.—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Journal of the Medical Society of New Jersey—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Vermont Medicine—Feb., April, June, July, Aug., Nov., Dec.

New York State Journal of Medicine—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Journal of the Kansas Medical Society—Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Wisconsin Medical Journal—Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Journal of the Iowa State Medical Society—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Journal of the Arkansas Medical Society—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Journal of the Medical Association of Georgia—Jan., April, May, June, Sept., Oct., Dec.

Journal of the Oklahoma Medical Association—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

California State Journal of Medicine—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Kentucky Medical Journal—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Southwestern Medicine—Jan., Mar., April, June 2, Aug., Sept., Oct., Dec.

Northwestern Medicine—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

American Journal of Diseases of Children—April.

American Medical Association Journal—Jan., Feb. 4, Mar., April, May 4, June 4, July 4, Aug. 3, Sept. 5, Oct. 4, Nov. 4, Dec. 4.

The American Philatelist—February.

Pennsylvania Medical Journal—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Maine Medical Association—Feb., June.

Washington Medical Annals—Jan., Mar., May, Sept., Nov.

Medical Summary—Jan.

Virginia Medical Semi-Monthly—Jan.

Bulletin of Syracuse University—April.

The Bacterial Therapist—Nov.

Medical Institutes.

Miscellaneous Nostrums.

Kidney Diseases and Diabetes.

Louisiana State Board of Health.

St. Paul Medical Journal—Jan.

Texas State Journal of Medicine—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Journal of the Tennessee State Medical Assn.—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

The Clifton Medical Bulletin—Feb., Oct.

Journal of the Florida Medical Assn.—January.

Bulletin of the Med. Society & Chir. Faculty—

Vermont Medicine—Jan., June, Sept., Oct.

Rhode Island Medical Journal—Jan., Feb., Mar., April, May, June, July, Aug., Sept., Oct., Nov., Dec.

There were also received 33 books, as follows:

Montgomery, E. E.—Care of Gynecologic Patients.

Jorden, E. O.—General Bacteriology.

Gradwohl, R. B. H.—Newer Methods of Blood and Urine Chemistry.

Billings, Frank—Focal Infection.

Jan., April, May, Oct.

Flint, Austin—Manual of Physical Diagnosis.

Greene & Brooks—Diseases of the Genito-Urinary Organs.

Sluss, J. W.—Emergency Surgery.

Bucholz—A Manual of Therapeutic Exercise and Massage.

Munro, H. S.—Handbook of Suggestive Therapeutics, Applied Hypnotism and Psychic Science.

Ballinger, H. C.—Eye, Ear, Nose and Throat.

Carman, R. D. and Miller, Albert—Roentgen Diagnosis of Diseases of the Alimentary Canal.

Ochsner, E. H.—Physical Exercise for Invalids and Convalescents.

Price, N. C.—Roentgen Technic.

Davis, F. P.—Impotency, Sterility and Artificial Impregnation.

Musser, J. H. and Kelly, T. C.—Handbook of Practical Treatment, Vol. 4.

Owen, H. R.—Treatment of Emergencies.

Carroll, R. S.—The Mastery of Nervousness.

Lewis, H. F. and Roulet, A.—Handbook of Gynecology.

Kemp, R. C.—Diseases of the Stomach, Intestines and Pancreas.

Blair—Diseases of Mouth and Jaws.

Sutton—Diseases of the Skin.

Norris—Blood Pressure and Clinical Application.

Rose—Physical Diagnosis.

Pettibone—Physiological Chemistry.

La'Vake—Talks of Obstetrics.

Garrison—History of Medicine.

Radasch—Manual of Anatomy.

Crossen—Diseases of Women.

Burnham—First Aid & Emergency Treatment.

Ruhrah & Mayer—Poliomyelitis.

Williams—Obstetrics.

Wall—The Prescription.

Stelwagon—Diseases of the Skin.

I want to take this means of thanking Miss Wilson, Librarian of the College of Medicine, University of Nebraska, for her splendid work in caring for our Library, and in assisting me in supplying the bibliographies asked.

In conclusion, I want to urge all members wishing help in securing data and information on any medical subject, to avail themselves of the opportunity offered in this department.

Respectfully submitted,
Wm. P. Wherry, Librarian.

## Book Reviews.

Talks on Obstetrics by Rae Thornton La Vake, M. D., Instructor in Obstetrics and Gynecology, University of Minnesota; Obstetrician-in-Charge of the Out-Patient Obstetric Department of the University of Minnesota; Associate Attending Obstetrician and Gynecologist to the Minneapolis City Hospital; Obstetrician-in-Charge of the Out-Patient Obstetric Department of the Wells Memorial Dispensary; Obstetrician to the Swedish and Abbott Hospitals, Minneapolis; One Time Assistant Resident Obstetrician to the Sloane Hospital for Women in New York. St. Louis: C. V. Mosby Company, 1917. Price $1.00.

As its title announces, this work is not a text book on obstetrics. It is however, a little volume of 150 pages that is full of sensible advice. The special thing emphasized is "prophylaxis" with reference to mother and child.

The last chapter, "Rules in Obstetrics" tersely sums up the contents of the book. The book is one that the student in obstetrics should carefully peruse.

C. W. P.

## NOTES.

Captain E. A. Van Fleet recently left for duty at Fort Sam Houston, Texas, Base Hospital No. 1.

Dr. F. L. Frink of Newman Grove was called to Fort Riley for service May 1st.

Lieutenant J. Calvin Davis of the Medical Reserve Corps stationed at St. Louis, visited his parents in Omaha recently.

Doctors J. C. Tucker and C. E. Remy of Ainsworth have been designated pension examiners in Brown county. Dr. Tucker is doing service in France and Dr. Remy is awaiting a call to sail.

Dr. L. T. Sidwell, first assistant physician at the Lincoln state hospital for insane has been appointed by the board of control as superintendent of the Kearney Tuberculosis Hospital to succeed Dr. L. S. B. Robinson.

## NECROLOGY.

Dr. Milan D. Baker of Norfolk died April 27th. Dr. Baker has practiced medicine in Madison and Tilden. He was at one time county coroner and was a veteran of the Spanish-American war.

### ANNOUNCEMENT

Dr. M. G. Wohl announces to the Medical Profession of the State of Nebraska, that he has severed his connections with the Nicholas Senn Hospital, Omaha.

His present address is 800 Brandeis Theatre Bldg., Omaha. Phone Tyler 1280.

The Storm Binder and Abdominal Supporter
(Patented)

(Special Sacro-Iliac Belt)
Men, Women, Children and Babies
For Hernia, Relaxed Sacro-Iliac Articulations, Floating Kidney, High and Low Operations, Ptosis, Pregnancy, Obesity, Pertussis, Etc.
Send for folder with testimonials of physicians. Mail orders filled at Philadelphia only—within 24 hours.
KATHERINE L. STORM, M. D.
1541 Diamond St., Philadelphia.

# THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, LINCOLN, MAY, 1919

Vol. III. Norfolk, Nebraska, June, 1918. No. 6

CONTENTS.

Page

Nephritis, A. Sachs, M. D., Omaha........ 169

Report of the Department of Health, Wm. F. Wild, M. D., Commissioner of Health.. 173

Rectal Examinations in Obstetrics, Palmer Findley, M. D., Omaha........ 175

Treatment of Eclampsia, J. Clifton Edgar, M. D........ 177

Report of Medico-Legal Defense Committee........ 178

Progress of Birth and Death Registration in the United States........ 179

Case Reports, John E. Summers, M. D., Omaha—

- Report of Case of Lipoma of the Caecum Causing an Intussusception........ 180
- Report of Case of Wandering Spleen—Excision........ 181
- Report of Case of Ruptured Ovarian Cyst........ 181
- Coexisting Intra and Extra-Uterine Pregnancy, J. W. Duncan, M. D., Omaha.... 182

Medical Organization for Government Service........ 182

The Fiftieth Annual Meeting of the Nebraska State Medical Association........ 183

Editorial........ 186

Honor Roll........ 198

County Society Notes........ 199

## Nephritis.*

A. Sachs, M. D., Omaha.

The treatment of nephritis has changed considerably in the last few years, and is at present being founded on a more rational basis. In this paper I wish to discuss mainly the chronic forms of nephritis.

It is impossible to find a universal classification of nephritis that is acceptable to both clinicians and pathologists. Each have their own individual ideas and each side claims that their classifications is superior to that of the other. However, it is quite immaterial which one is followed just so we understand the pathology that we have at hand.

In times past we mainly looked to the pathologist for our final diagnosis, and if our clinical findings did not correspond entirely to the pathologic picture, we considered that we were mistaken. We know now that often times a functional kidney derangement may be present before a permanent pathologic change has taken place. Therefore, it is advisable from a therapeutic standpoint, to follow a functional rather than a pathologic classification.

Nephritis can be divided into three forms: chloremic, azotemic and vascular.

A chloremic nephritis is one in which the chlorides and allied salts are excreted with difficulty. It is of the exudative type and corresponds to our parenchymatous nephritis.

An azotemic nephritis is one which excretes the nitrogenous products with difficulty. It is of the non-exudative type, that is, with little or no oedema, and corresponds to our interstitial type of nephritis.

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

A vascular nephritis is one that corresponds to our arterio sclerotic kidney.

Previously, we depended entirely upon the presence of casts, albumin, specific gravity, amount of urine, etc., to make our diagnoses, and in most cases it is still quite sufficient, but these findings give us only meager information as regards the functions of the kidney, therefore, in some cases it is not only necessary to make a careful urinalysis, but a blood examination as well.

The work on experimental nephritis in animals has added considerable to our knowledge of which portion of the kidney is involved. This was accomplished mostly by the use of different poisons, such as mercury, arsenic, etc. Schlayer and his co-workers hoped with functional tests, namely potassium iodide and lactose to show us the same in man. However, from a therapeutic standpoint, this as yet has added very little to our armamentarium.

The treatment of a nephritis in a hospital well supplied with laboratory facilities is much easier than treating a patient at home, but there are certain simple rules that are available to all which may be of some value.

The laboratory has added greatly to the scientific treatment of nephritis. In times past, patients were put on a diet with a definite chloride content. Then the chloride intake and output were estimated, from which the chloride balance was computed. Later, an additional ten grams of sodium chloride was given in a capsule, and it was noted how long it took the patient to excrete this additional ten grams. Normally, all should be out in 24 hours. If it took 48 hours or more, it was evident that the chlorides were being retained. A nitrogenous balance could be estimated in a similar manner, to ascertain the retention of the N products.

Monakow added twenty grams of urea to the above, and noted the time taken to eliminate this additional twenty grams. Normally, all should be out in not less than 48 hours.

These experiments consumed considerable time, and, through more advanced methods, were found unnecessary. The estimation of the rest nitrogen of the blood, the chlorides, etc., was found to be of material aid. Later, Ambard improvised a formula which proved also to be of great value. He found there was a proportional relationship between the urea of the blood and the urea of the urine; also, the chlorides of the blood and urine. In the blood, the rest nitrogen, the urea and the chlorides were estimated; in the urine, the urea and chlorides. Then, by a series of formulas, the urea and chloride retention could be ascertained. The urea factor, he called Kappa. Normally, Kappa is from 0.06 to 0.09. If Kappa is above 0.09 some impairment to excrete urea is present; if above 0.2, the prognosis is bad. Unfortunately, the calculations of Ambard were made with the hypobromide methods, which was considered faulty by some. However, the principle has been confirmed by McLean and Selling, who used more trustworthy methods.

Investigators, more notably Folin, Denis, Benedict, Myers, Fine, Chace and others, have been constantly at work to simplify blood chemistry by the use of colorimetric methods, so that the ordinary laboratory worker could use this valuable aid in renal diagnoses.

For a long time, only the non-protein nitrogenous elements of the blood were estimated, but today, the creatinine is found to be of as much value, if not more than the others. Estimations of the uric acid is also of value. The blood sugar is important because a hyperglycemia frequently exists in a severe nephritis. An acidosis is also a frequent complication, therefore the $CO_2$ combining power of the blood plasma, or the alveolar $CO_2$ tension should be estimated.

The elimination of urea varies a great deal with a patient's diet, but the creatinine excretion does not.

The source of creatinine is largely endogenous and is found chiefly in the muscles. It is constantly present in the blood in about the same quantity at all times in a healthy adult.

Uric acid is partly exogenous and partly endogenous, about half and half. It is the chief end product in man, of the nucleo protein metabolism.

The most easily excreted of these products is creatinine, the second urea, and third, uric acid. For that reason, the uric acid is first to be retained in early cases of nephritis. As the nephritis progresses, the urea of the blood is increased, and later the creatinine. By the newer colorimetric methods, it is comparatively easy to determine all of these products.

A routine examination which is usually carried out, is as follows: Estimation of urea, creatinine and sugar of the blood; also the $CO_2$ combining power of the blood plasma (Van Slyke method). The uric acid takes considerable time in its estimation, and as a routine is not needed unless some special reason exists for determining the same. Cholesterol is also difficult to determine, and as yet has no real practical value, so in routine work is omitted.

If a Van Slyke is not at hand, the alveolar $CO_2$ tension (by Marriott method) can be taken. However, it is not as accurate a guide for acidosis as the Van Slyke. The phenolsulphonephthalein test of Rowntree and Geraghty is also done in the routine examination. It is of much value and very simple, so that all can make use of it if desired.

The foregoing determinations are undoubtedly a great help, and add much to the scientific hospital treatment of patients, but are of little or not value to the treatment of patients at home unless some laboratory is in the vicinity.

I do not wish to convey the idea that nephritis should be treated from the laboratory, but only use it as an aid. Never be overbalanced by any one method, but use all clinical, laboratory and other means available that are for the benefit of the patient. I know it is also true that a man in the country or a busy practitioner cannot make much practical use of the foregoing unless he has a laboratory assistant, therefore I wish to mention some of the clinical points or methods that may be of use to us all.

Chloremic nephritis corresponds to our chronic parenchymatous form. It occurs with a large amount of oedema or a general anasarca. The urine is scant and of high specific gravity. The albumin content is high and many casts are also present.

An azotemic nephritis is our contracted kidney, corresponding to the chronic interstitial nephritis. It causes little or no oedema unless it occurs from a cardiac decompensation. The urine is markedly increased in amount and of low specific gravity. This kidney has lost its power of concentration, and for that reason must put the urine out in a dilute form. A simple test that can be applied is as follows: Take the specific gravity of the urine for two days while the patient is on his usual fluid intake, which should be approximately known. Let your patient thirst, or rather markedly reduce the fluid intake, and again take the specific gravity, and you will find that it is still low. For example, say before thirsting it was 1.010; after thirsting it will only raise 2 or 3 points, 1.012 or 1.013 (usually less). Normally it raises 5 or more points.

The albumin content is usually small and casts not very plentiful. Mosenthal has modified the renal test diet of Schlayer so as to be of more practical value. He has shown that a night urine which becomes increased in quantity and of a low fixed specific gravity is a sign of marked renal disturbance.

It must be remembered that we may have a mixed form of nephritis, but the predominant features will decide its classification and treatment.

The vascular nephritis corresponds to our arterio sclerotic kidney, and in reality is often hard to separate from the azotemic. It more often has complications that are due to arterio sclerosis. For example, vessel crisis as angina pectoric, etc. The urine is frequently of less amount and slightly higher specific gravity. The treatment of these latter two varies but very little, so fine differential points are of no avail.

The treatment of nephritis from a medicinal point of view often time varies because one man gets results with one form of drug, while another gets the same result from something else. I merely mention this because it will be impossible in this paper to deal with anything but general principles.

It is claimed that if one-fourth of our total kidney substance is maintained, it is sufficient to hold us in fairly good health. The kidney has great regenerative power and some pathologists claim that excluding the liver, the kidney is more able to reproduce itself than any other organ in the body.

The dietary management of nephritis is greatly simplified since our newer methods of examination have been employed. A chloremic nephritis should be put on a salt free diet. This was first used by Widal and as all newer things have been introduced, came into disrepute because it was used on all cases. The cause of oedema in a chloremic nephritis is still an open question for discussion. Whether it is the abnormal accumulation of acid in the body which causes the oedema and indirectly the chloride retention (Fischer) or whether the retention of chlorides causes the oedema matters but little. The fact remains that the chlorides are retained and it seems logical to put the patient on a chloride free diet.

The fluid intake should be restricted and all available channels of elimination should be used, namely, bowel, skin, etc. Here again, different theories will meet in opposition, but it seems consistent that if we have a patient that is full of water one of the best ways to lessen its increase is not only to increase its output but also diminish the intake. Practically this has often been found beneficial, regardless of whether this is due to salt concentration (Fischer) or otherwise. The methods used to increase the elimination and thus lessen the oedema are many. However, it had better be taken up in the discussion rather than in the paper itself. I merely wish to mention the old Karell cure is still of benefit in many cases.

We know that acidosis plays an important role in some nephritics, and Fischer's therapy has undoubtedly been of great value in many cases of this caliber. Many men had the mistaken idea that alkalinization would cure or help all nephritics. This Fischer does not claim, and before condemning it entirely, read what he really has to say.

Which cases should be alkalinized and which not, is mighty hard to answer, but at least all cases that show an oedema with an acidosis should be alkalinized. Which others should be alkalinized I cannot say, but I will quote the last paragraph in Fischer's chapter on "Prophylactic Measures Against Nephritis," which is as follows: "I advise anew that the objective thinker in medicine reject my views and first treat his patient with nephritis and its alleged consequences by more approved methods. If he should feel that his patient is going to die, alkali, salt and sugar might be tried. If the patient dies, the expected will merely have happened. If he lives, it proves nothing, but it may encourage repetition of the experiment, and this, I feel, is all that is necessary."

The above has a bit of sarcasm but also a lot of truth. However, since the subject of acidosis is still in its infancy, all that is possible is to do the best we can.

A simple method given for testing acidosis is the bicarbonate method. Normally 5 grams to 10 grams of bicarbonate of soda will render the urine alkaline or amphoteric. In mild acidosis 20 grams; in severer acidosis, 30 to 40 grams; in extreme acidosis, 40 grams or more; in coma, often non-neutralizable (Barker Monographic Medicine).

Sellards gives a simple blood test which can be done with 1 cc. of blood serum. It depends upon the fact that normal blood serum reacts acid to phenolphthalein, but if heated, reacts alkaline. Take 1 cc. of blood serum and shake with 25 cc. of absolute alcohol, and filter. The filtrate with a few drops of phenolphthalein is evaporated to dryness. With normal human serum the residue is red. In mild acidosis it is colorless, or a slight pink, but by adding a few drops of water a red clover develops. In more marked acidosis the residue is colorless and remains so even after adding water. Sellards relies on the above test and recommends it highly, but personally, I have not used it long enough to give out any report on the same.

An azotemic nephritis should be put on a restricted proteid intake. This is merely a general rule and should be looked upon as such. The patient may have all the fluids desired unless contraindicated on account of a cardiac complication. If oedema is present it is usually cardiac, and treatment for the same must be given. Here again a large variety of drugs might be named with indications and contraindications, but time will not permit, so we must pass it by.

Uremia is a frequent complication and often needs vigorous treatment. Here again we must avoid the theorist or our patient might want for treatment should we listen to all and follow the advice given. We know that in uremia the urea of the blood is increased and any method employed to aid in its elimination is beneficial. If convulsions are present, we must control them. A hot pack, bath or other means of sweating is beneficial. The theory that it concentrates the blood and thus increases the toxemia is theoretically correct, but practically we know that sweating is of great benefit. Very little nitrogen is excreted through the skin, but sweating aids in dehydrating the cerebral oedema which is present, and also aids in quieting the patient. If our patient has full bounding pulse, bleeding is beneficial. This is to be repeated as deemed advisable by the physician in charge. Drastic cathartics are beneficial because the elimination of nitrogen by the bowel can be materially increased. The question of drugs will again be omitted as it is largely a matter of personal preference.

In uremia a diet consisting only of sugar water should at first be used. Later a milk and cream diet can be substituted, cream materially adds to the caloric value of a milk diet. Sedatives for the control of convulsions must be used, but use as little as possible on account of their lessening the urinary and other secretions or excretions. Other complications must be met as they arise.

The treatment of vascular nephritis resolves itself into the treatment of arterio sclerosis. Here again it matters little whether the kidney toxins produce the arteriosclerosis or vice versa. On account of the frequent cardiac and other complications a limited fluid intake is advised. Knowing that excessive eating especially proteids, condiments, use of alcohol, tobacco, etc., produce arterio sclerosis, the same are prohibited. The treatment is largely the same as in azotemic nephritis and therefore will not be given here.

I hope that some day in the near future we will be able to utilize the blood chemistry of nephritis as we do the Wassermann for syphilis, and then dietary treatment will be more scientific in all localities.

## Report of the Department of Health.

Wm. F. Wild, M. D., Commissioner of Health.

It might be of interest to the members of the State Medical Association, and the profession generally, to know what the State Department of Health has been trying to do and what we have accomplished since the reorganization on July 24, 1917.

### Epidemiologically.

Sanitary surveys have been made as regards water, sewage disposal, garbage collection, location and condition of dump, hogs and other animals in the city limits, condition of the town as regards filth, drainage, and the accumulation of live stock and manure in the city limits, in the following places: Culbertson, McCook, Indianola, Oxford, Beaver City, Orleans, Alma, Republican City, Curtis, Holdrege, Minden, Hastings, Sutton, Clay Center, Fairfield, Fairmont, Beatrice, Hickman, Falls City, Salem, Weeping Water, Wahoo, Ithaca, Cedar Bluffs, David City, Seward, York, Valley, Fremont, Grand Island, North Platte, Big Springs, Chappell, Broken Bow, Gordon, Valentine, Ainsworth, Bassett, O'Neill, Randolph, Newman Grove, Leigh, Norfolk, Wayne, Emerson, Dakota City, Winnebago, Oakland, Bartlett, Ericson, Hebron, Red Cloud, Prague.

This alone is considerable work, not only in collecting of data, but in compiling of same, and gives the department an idea as to where its efforts can be best devoted, and along what lines. Wherever we have information as to the exact condition of affairs existing, we are enabled to devote our efforts in the direction in which they will do the most good. It will, of course, take us some time to get this information up to the point where the survey will be complete, but we believe we have a good start, and hope to be able to continue.

### Poliomyelitis.

Last summer, shortly after taking office, we discovered an outbreak of this disease. The department immediately prepared circulars of information, showing early symptoms, as well as the requirements for the control, putting articles in the newspapers, guiding people so as to prevent the spread as much as possible, and we are pleased to say we had no serious outbreak. Whether our efforts were of any avail, of course we do not know, excepting that quite a number of places received a general cleaning.

### Scarlet Fever.

We have had some outbreaks of this disease, but have been insisting that the quarantine be strictly maintained, and for the most part, the disease has been limited.

### Smallpox.

Enormous numbers of cases of this disease have existed throughout the state, reaching almost every corner, and through physicians not reporting promptly to this department, unintentionally, of course, or else through lack of knowledge of the requirements for them to report, or, in still other cases, a lack of organization on the part of the local health authorities, the disease began to spread before its was realized. We have adopted a system of taking the matter up with the mayor and other men of importance in the community in which this disease exists, such as the president of the commercial club, president of the school board, and the local doctors, asking that they render every effort to have as many people vaccinated as is possible. We do not believe that ever before in the history of Nebraska have so many people been vaccinated as have been in the past eight months. Records in this office show that approximately 100,000 people have been vaccinated in the past eight months.

The most severe outbreak, as regards number of cases, occurred in Omaha. Dr. Connell, Commissioner of Health, did all in his power to prevent the spread of this disease, and in the past month, has seen that many thousands of people have been vaccinated.

### Vital Statistics.

We discovered, on taking charge, that the deaths were compiled to an extent, but not in any particular group form, or not exactly according to arrangement by age, as required by the Census Bureau; nor was there any division between male and female. In fact, we could make very little use of the statistics, excepting to show, in a general way, the gross mortality as was reported, and sub-divided into the more prominent diseases. However, since the writer took charge, about the middle of January, we are compiling the deaths by counties, and in the groups, fourteen in number, as recommended by the Census Bureau. We will now be able to tell not only the number of deaths that occur in each county from each specific disease for the year, but will be able to give this by months.

Regarding births, we wish to give a few figures for comparison, because we believe they will speak for themselves: The total number of births received for the fiscal year ending November 30, 1917, was 26,885.

I am not going further back than the time for which I was responsible. It must be remembered that births that occur in one month are not sent to this department until the following month. As I took charge in January I will, of course, hold myself responsible for the December registration.

| | |
|---|---|
| For December, 1916 | 2455 births |
| For December, 1917 | 2567 births |
| An increase of 112. | |
| For January, 1917 | 2264 births |
| For January, 1918 | 2729 births |
| An increase of 465. | |
| For February, 1917 | 2084 births |
| For February, 1918 | 2754 births |
| An increase of 670. | |
| For March, 1917 | 2228 births |
| For March, 1918 | 2722 births |
| An increase of 544. | |

The amendment to the vital statistics law is inconveniencing us to a considerable extent, but we are using every effort in our power to overcome these obstacles.

Immediately upon taking office, the writer began to check up the local registrars, and it was surprising the number of inactive ones found. We have most of the places straightened now, not all. It requires a considerable amount of work, and thousands of letters, but as figures show, we are getting results. We do not mean to state that Nebraska will be in the federal registration area within a year or two, because we are approximately only sixty-two per cent complete, instead of ninety per cent required by the government, but if our increase in efficiency continues, we do not believe it will be many years before we will be recognized. The medical profession as a whole is taking a much greater interest in this matter. As we have often stated, the best way to be sure of birth registration is for the physician to carry the blanks in his obstetrical grip, and then he is sure of having them at the needed time. We believe we have a birth rate in this state, when we consider what was coming in, and after checking up the local registrars, what was not coming in, of between 28 and 30 per thousand; whereas last year, our birth report was 21.5 per thousand. You can therefore see that we are approximately recording about 62 per cent.

### Sanitary Engineering.

Mr. H. P. Letton, our engineer who took charge on July 24, 1917, shortly thereafter left for the war. Due to the military demand and insufficient salary attached to this position, we have been unable to obtain a full-time sanitary engineer. However, we have done good work advising regarding the construction of sewer systems, and in the disposal and prevention of nuisances, and wish to inform those interested that at any time the department can be of any service in the way of giving advice as would relate to water supply or sewage disposal, kindly call on us, and same will be more than freely given. We do this without any expense to the municipality requesting it. We have continued our plan of examining railway water for federal authorities, that is used on inter-state trains, and whenever we uncover a bad supply, we put it on our list, and as soon as time will permit, we advise the local authorities as to the best method of correcting.

When the writer was epidemiologist, he got into communication with the Surgeon-General of the Public Health Service at Washington, with the result that we sent in monthly morbidity reports, and a telegram every Monday morning as to the outbreak of communicable diseases during the past week. The result is that we have received a letter from the Surgeon-General, informing us that as soon as his department receives more money, he sees no reason why Nebraska cannot have a collaborating epidemiologist. This, besides being an honor to the state as regards public health work, is also of economic value, by permitting of franking privileges through the mails.

We have also corrected our list of physicians throughout the state, and tried to keep it as perfect as possible, but owing to constant changes, due principally to the war, we are not quite positive whether or not the list is one hundred per cent correct. We believe that all departments have been co-ordinated, and are cooperating to the end that all will be a success, and while there are some little places here and there that could be materially benefitted, we suppose that this can be brought about.

One of the happy thoughts was to get out our baby book, which we are sending to the mother of every child whose baby's birth is reported, including the name, since December 1, 1917. The appropriation we have for this purpose is not sufficient to permit of general distribution, but we are putting the books where they will be most useful. We have not had time to check up, but we will do so in the near future, the number of birth certificates in the office that contain the name of the child. At present, the system we have adopted, of sending out supplemental name cards, gives us an efficiency of approximately ninety per cent. We do not know what it was before, but we are quite sure it was nothing like this.

We are now in the process of revising rules and regulations, which will be out in a few months. It must be remembered that it takes considerable time, particularly when we want to make the rules clear and concise, so as to avoid misunderstanding, and so that they will be of use not only to the medical profession, but to other citizens of the state as well.

The State Department of Health at present consists of the following:

BOARD OF HEALTH PROPER.

Hon. Keith Neville, Governor.
Hon. Willis E. Reed, Attorney General.
Hon. W. H. Clemmons, Supt. of Public Instruction.

The personnel of the Health Department is as follows:

Wm. F. Wild, Commissioner.
W. H. Wilson, Epidemiologist.
W. N. Grant, Sanitary Engineer.
Charles Morrissey, Laboratory Assistant.
May F. Hyland, Statistician.
Edna Kelly, Stenographer.
Esther Tappan, Stenographer.
Alice R. Sleeth, Stenographer.
Olinda Wachter, Stenographer.

THE BOARD OF MEDICAL EXAMINERS.

W. T. Johnson, Pawnee City, President.
Charles L. Mullins, Vice President.
Joseph E. Spatz, Treasurer.
Joseph J. Hompes, Secretary.

## Rectal Examinations in Obstetrics.*

Palmer Findley, M. D., Omaha.

Twenty-four years ago Professor W. W. Jaggard, in lecturing on puerperal sepsis, laid down the dictum, "Limit to a Minimum the Number of Vaginal Examinations." As a student I accepted this dictum without reservation, and in the years that have followed I have consistently endeavored to limit the number of vaginal examinations to the minimum.

Three years ago when attending a clinic in one of the German Uuniversities, where every parturient was examined from ten to fifty times in the course of the second stage of labor, I observed that about one-third of these cases were infected, and was convinced that a large percentage of these infections was accounted for by the repeated vaginal examinations made by instructors and students. I could not otherwise account for the percentage of morbidity. I then and there determined to be even more faithful to the dictum of Professor Jaggard, and since that time have largely substituted rectal for vaginal examinations during labor and in the early puerperium. I claim no priority in this. Rectal examinations were made to substitute vaginal examinations by Kronig in 1893. It was at this time that he published his first observations in the Zeit, fur Geb., March 10, 1894, in which he records that rectal examinations were made in his clinic to the exclusion of vaginal examinations in ninety per cent of all parturient women.

---

*Read before the Botna Valley Medical Society, July, 1917.

The procedure has gained favor with a large majority of obstetricians the world over. In labor and in the late puerperium, there is little need of substituting vaginal for rectal examinations, but during labor and in the early puerperium all will agree that vaginal examinations are fraught with the danger of conveying infection to the upper genital tract, and that no amount of precautions can afford absolute security. In the vagina, at all times, we find pathogenic microorganisms, which, if conveyed to the cervix, and beyond the cervix to the placental site, may and commonly do result in infection, so that no matter how careful we are in the preparation of the examining fingers, and of the external genitalia, the microorganisms residing in the vaginal cavity may be conveyed to vulnerable parts. No such dangers attend rectal examinations and it only remains to determine how far rectal examinations may serve as an adequate substitute for vaginal examinations during the course of labor. It is not contended that vaginal examinations can be altogether dispensed with in the course of labor, but I do contend that nine women out of ten can be delivered safely and intelligently without a single vaginal examination during the course of labor, and for some days following.

It is contended that the condition of the soft parts can be determined as accurately per rectum as by the vaginal route. In primiparae this is not so easy, but can be satisfactorily accomplished if the examination is made in the intervals between labor pains when the margins of the cervix are less thinned out.

When we combine abdominal palpation with rectal examination there is usually no difficulty in determining the presentation and position of the foetus. Sutures and fontenelles can usually be made out per rectum, and there is little difficulty in determining whether the head is floating, fixed or free. If there is a bag of waters in advance of the child's head, rectal examination made in the height of the pain will readily disclose it.

We are all confronted with cases in which it is questionable whether or not the living child can be delivered through the natural passage; such cases are given the test of labor, and failing in this test, caesarian section may be performed. But if repeated vaginal examinations are made during the course of this test, the possibility of infection forestalls any recourse to caesarian operation; in other words, the test has failed, and we have waived the privilege of substituting caesarian section because of the repeated vaginal examinations, with their attending dangers. In such cases rectal examinations will afford all the evidence that can be obtained from vaginal examinations, and with no disk of infection. It is only when rectal examinations are indefinite, and permit of no sure conclusions, that vaginal examinations should be substituted, and just as in vaginal examinations, so in rectal examinations, confidence in our findings will grow with experience.

To the beginner it might be well to first make a vaginal examination, then immediately follow with a rectal examination, so that the two findings can be checked up. As experience accumulates, one will find that vaginal examinations are demanded less and less, until they are almost wholly substituted by rectal examinations, combined with abdominal palpation.

The morbidity and mortality of puerperal sepsis is still so great as to justify the adoption of all possible precautionary measures. It is estimated that ten to fifteen per cent of all women delivered are infected to a greater or less degree, and that the mortality from puerperal sepsis runs from 2 to 2.5 per 1000. If the substitution of rectal examinations for vaginal examinations during labor and in the early puerperium will lessen these hazzards in the least degree, and will not impair efficiency in the conduct of labor, it is imperative that we should proceed with the most difficult of all tasks—that of unlearning and undoing that to which we have been long committed.

I anticipate that there are physicians within my hearing who are saying to themselves that they have never hesitated to make repeated vaginal examinations during the course of labor and in their long practice have never had a case of puerperal sepsis. To such an inquirer I would put the question: How carefully have you observed your cases throughout their lying-in days, and to what extent are you familiar with the exact condition of your patients in the weeks, months and years following delivery? The facts which confront every man who has access to carefully kept records of his cases are that a low or high grade of temperature, a temperatire that ranges from 100.4° to 105° F. will appear at some time during the course of the puerperium in at least one case in seven, and that the vast majority of women who seek the services of the gynecologist date their troubles from child-bearing. And yet few in number are aware that they were infected in child-birth.

Daily visits throughout the puerperium, and the services of a trained nurse together with a thorough examination of our cases at the end of the puerperium would convince the most skeptical of the frightful prevalence of puerperal sepsis, and of the necessity of adopting every means at our disposal to lessen the hazzards.

Rectal examinations are painless and can be employed as frequently as desired throughout a long labor. They require no preparation on the part of the physician and patient. The progress of labor can be intelligently followed and above all there is no risk of sepsis. If unhappily fever does arise in the course of the puerperium, the peace of mind enjoyed by the attending physician surpasseth all understanding. If you can say that you delivered the patient without making a single vaginal exploration, the guilt of sepsis does not rest upon you, and you will be comforted.

## Treatment of Eclampsia.

J. Clifton Edgar, M. D.

The Journal of the American Medical Association.

Convulsive toxemia, except in a small majority of instances, is always preventable. There are even those optimists who state that if certain measures of prevention are carried out, eclamptic convulsions will cease to exist.

### Preventive Treatment.

Hence long step forward in the prevention of eclampsia is the attention that in the past few years has been directed to the importance of prenatal care of women, especially of the poorer class, for the purpose of reducing infant and maternal mortality.

### Curative Treatment.

Our time-honored principles of the curative treatment of toxemic convulsions, namely, (1) control of the convulsions; (2) elimination of the toxins, and (3) termination of the pregnancy, still hold good, although recent clinical experience has somewhat modified them.

A certain number of eclamptic patients, from 8 to 10 per cent, for a minimum, will die, no matter what treatment is used, and the majority, 80 or 90 per cent, will recover under a conservative treatment, which does not include shock-producing operations or shock-producing drugs.

A one-time advocate of active surgical and medical treatment, and bitterly opposed to morphin in eclampsia, experience of the past five years has radically changed my views and teaching. Like many another obstetrician, I frankly confess to have been won over to the use of morphin. I stand for a reasonably conservative treatment, neither an ultraradical, with its incisions of the cervix, accouchment force, difficult forceps or version, vaginal or abdominal cesarean operation on the one hand, nor an ultraconservative treatment, with its main reliance on morphin and eliminations, on the other. So long as eclampsia is a mystery, a disease of theories, no one treatment is applicable to all cases.

One would, perhaps, unhesitatingly accept the ultraconservative method were it not for the clinical fact, which, as far as I am aware, has never been disproved, namely, that the shorter the time that elapses between the first convulsion and the emptying of the uterus, the better the prognosis for mother and foetus. This apparent fact I referred to in 1913, and clinical observation since that time has strengthened the belief.

Given a case of convulsive toxemia: While the treatment is still empiric, a modified conservative treatment has given me the best results. Chloroform, nitrous oxid, and even ether, should be avoided if possible. The first has been shown to predispose to or cause hepatic necrosis; the second temporarily increases blood pressure and favors cerebral congestion. Ether is the safest. It should be borne in mind that any vapor anesthesia long continued lessens the patient's chances.

A full dose, half a grain of morphin, is administered hypodermically in place of vapor anesthesia. A characterized specimen of urine is now taken for examination. The stomach is then washed out with a sodium bicarbonate solution, and 2 ounces of magnesium sulphate in solution are placed in the stomach before withdrawal of the stomach tube. Some use castor oil in place of the magnesium sulphate. I sometimes substitute three drops of croton oil in sweet oil. Magnesium sulphate seems to act promptly and with very little irritation. A colonic irrigation of several gallons (from 4 to 5) of a 5 per cent glucose solution is now given. Some use sodium bicarbonate. I never use sodium chlorid solution."

If possible, the patient is placed in a darkened room, and kept as quiet as possible. In a hospital ward screens are placed about the bed. The importance of free ventilation is to be remembered. The morphin is repeated in smaller doses (from 1/6 to ¼ grain), according to indications, keeping the respirations in the neighborhood of 10 or 12. I do not follow a routine. In patients of marked nervous instability, a full dose of sodium bromid (from 30 to 40 grains) in solution by rectum often assists the morphin in controlling the convulsions. I have entirely abandoned the use of chloral hydrate.

I am still uncertain whether the morphin increases the infant mortality. Possibly it does. Even in high systolic blood pressure (from 175 to 200 mm.) I do not employ phlebotomy as frequently as I formerly did, as I fear the concentration of the toxins, and the sudden subsequent fall of blood pressure with even spontaneous labor, as has been observed in the use of veratrum viride.

Multiparas, in the absence of obstructed labor, with their comparatively short period of prospective labor ahead of them, are ideal cases, good risks for the conservative morphin, eliminative, noninterference treatment. Primiparas, on the other hand, with their twenty hours of prospective labor to face and their greater intra-abdominal pressure, are not such good risks. And then unfortunately eclampsia is four times more common in the latter than in the former.

The beneficial results obtained from the removal of the foetus and uterine contents is largely, I believe, a matter of pressure relief, not the doing away with the nitrogenous output of the foetus or placenta; relief from pressure on the kidneys and renal vessels, pressure on the intestine, portal circulation and liver. Witness the frequency of eclampsia at or near term, the severity of the attack in hydramnios cases, in twin pregnancy, and on the other hand, the improvement so frequently observed after spontaneous or artificial rupture of the membranes. However, better an expectant attitude, with our main reliance on morphin and eliminatives, than a shock-producing delivery operation.

A. B. S.

---

## Report of Medico-Legal Defense Committee.

Gentlemen: The year 1917 has brought to the attention of your committee twelve new cases.

In one of these, the defendant doctor refused to fill out the blanks and answer the questions, as provided in our by-laws, he claiming that he had no right to make such disclosures. After being assured that he had the right to do this and that the communication was one which would be deemed "privileged," he still refused to make the disclosures. The committee then informed him that they could not enter his case, and we did not do so.

One other case we did not enter because it was founded solely on breach of contract, this being a field of defense which the committee feels that it is not empowered to enter, or at least to spend the money of the Association in the defense of physicians and surgeons involved in such controversies. No objection was made to our attitude.

The third case was very similar to the second one, except that we entered the case, under the impressions at the time of entry, that it was a mal-practice case. After several preliminary motions on the part of the attorneys for the Committee, it was stipulated, and made a part of the record in the case, that the action then pending was solely for damages for breach of contract; at this juncture the Committee decided that they had no further rights in the case, so advised the defendant, and agreed to pay the attorney fee to that date.

The defendant doctor insisted that we had the power to defend his case and that he was entitled to our assistance. Had we thought that the by-laws would, even under a strained construction, permit this, we would have gladly exerted our every effort in his defense. The doctor has also stated that he would bring this question squarely before you at this meeting, and in justice to him, and for our future guidance, we trust that he will do so. In no instance has the Committee refused to enter a case, except that the decision was unanimous and also concurred in by the attorney for the Committee.

In the fourth case we made three motions, two of them to require plaintiff to make his petition more definite, and the third to put up security for costs. We were sustained in all three of them, and upon the Court ruling in our favor on the third one, he dismissed the case, at his own cost, with liberty to start it again if he desired. While we have absolute confidence in our case, we hope that he will see fit to quit where he is at.

Only two of the cases have been tried, one case requiring three days, and both resulting in complete vindication of the skill and carefulness of our doctors.

The third case disposed of this year was one involving a legal technicality, which after presentation to the Court resulted in a ruling in favor of the defendant doctor and a dismissal of the suit.

One case carried over from last year has been successfully defended and one settled at the request of the doctor.

Four of our cases are now ready for trial and may be called at any time. The remaining case is only in the making.

We also have two cases which are of last year and are not yet disposed of. One of these may not come to trial, the plaintiff having died since the action was instituted.

One matter which the attorney for the Committee desires to urge upon the members of this Association is that you must not forget that your casual remark about your fellow practitioner may involve him in a long drawn suit for damages, it has happened in the Association, and with the suit as a result. It is a pleasure also, to recall the readiness and ability with which the members of this Association, who have been called upon, have responded as witnesses in these cases, and we take this means of thanking them.

On January 1st, 1918, there was a balance in the defense fund of $1,614.69, and to this should be added $929.00, dues received to April 29th, 1918. The Committee's attorney is to be paid $250.00 for services for the year 1917, leaving on hand a balance of $2,293.69. There should be appropriated for the Chairman of the Committee and his expense, two-thirds of his year's salary and expense money, approximately $333.33, this taking care of his office until January 1st, 1919, and the full salary of $300 and expense of $200 for that office for the year beginning January 1st, 1919.

Respectfully submitted,
A. S. v. Mansfelde, Chairman.
Joseph M. Aikin.

## Progress of Birth and Death Registration in the United States.

Washington, D. C., May 20, 1918.—The recent inclusion of Hawaii has extended beyond the limits of Continental United States the area for which the Census Bureau annually collects and publishes death statistics. Within this area now reside about 73 per cent of the total population of Continental United States and Hawaii. It comprises, in all, 27 states, 43 cities in other states, the District of Columbia, and the territory of Hawaii. East of the Mississippi the only states not included are Alabama, Delaware, Florida, Georgia, Illinois, Mississippi, and West Virginia, while west of the Mississippi the only states included are California, Colorado, Kansas, Minnesota, Missouri, Montana, Utah and Washington.

The annual collection of death statistics from states and cities maintaining adequate registration systems was begun by the Census Bureau in 1902, the first report covering the calendar years 1900 to 1904, inclusive, and for each succeeding year a separate report has been published. The original registration area contained 40 per cent of the total population of the country. It remained unchanged until 1906, since which year it has shown an almost uninterrupted increase in geographical extent and in proportion of total population, until at present it contains nearly three-fourths of the country's inhabitants.

In birth registration highly satisfactory progress has been made during the past two years, although there are still a number of states in which adequate death registration prevails but in which the registration of births has not yet reached a sufficiently close approximation to completeness to justify the acceptance of the local records by the Census Bureau. The birth registration area, as at present constituted, comprises 19 states—the six New England states, New York, Pennsylvania, Maryland, Virginia, North Carolina, Kentucky, Ohio, Indiana, Michigan, Wisconsin, Minnesota, Utah and Washington—and the District of Columbia. This area is estimated to contain about 51 per cent of the total population of the country, as against about 31 per cent when the collection of birth statistics was begun, a little more than two years ago, from an area comprising the six New England states, New York, Pennsylvania, Michigan, Minnesota, and the District of Columbia.

This growth, in so short a time, is very gratifying indeed. It is, however, unfortunate that in the United States the registration of vital phenomena has thus far depended, first, upon adequate state or municipal legislation, and, second, upon the adequate enforcement of that legislation. As a result, some states and municipalities maintain efficient registration systems while others do not. Until the matter is placed under Federal control or supervision it is not likely that reliable birth and death records, approximating completeness, will come into existence throughout the entire United States. Since the military registration of June 5, 1917, the desirability of maintaining such records has become apparent to all.

## Case Reports.

John E. Summers, M. D., Omaha.

### Report of Case of Lipoma of the Caecum Causing an Intussusception.

Although the occurrence of an intussusception due to the presence of an intra-intestinal tumor, the growth acting as the wedge or apex of the intussusceptum is an occasional occurrence, a lipoma acting in this way is one of the rarest of occurrences because comparatively few growths of this type have been found in the intestinal tract. Sub-serous lipomata arising from the appendices epiploicae or fatty tissue of the mesentery are not infrequently encountered. In so far as I know, and according to Stetton who has written the best article upon this subject with which I am familiar, only 77 sub-mucous lipomata of the gastro-intestinal tract have been reported in medical literature. Of these three were in the stomach, thirty-one in the small bowel, forty-one in the large bowel. The tumors may be single or multiple, small as a bean or large as a man's first. The large tumors are found in the colon and of these only six have been found in the caecum. Most commonly the tumors have a narrow pedicle, but the base may be sessile. The growths are not congenital and have a more or less extensive connective tissue investment or net-work, and spring from the connective tissue of the submucosa. Occasionally these tumors, having had polypoid pedicles, are expelled from the rectum.

Knowing of the rarity of lipomata of the caecum I wrote Dr. W. J. Mayo as to frequency of the finding of lipomata in the operative work at Rochester, and replying, he says: "We have made a careful search of our records and find only one case of lipoma of the caecum. This was found secondarily in a resection for caecal stasis—a submucous lipoma being located 5 cm. from the ileo-cecal valve. The records show a lipoma of the descending colon and one of the sigmoid in our early cases, but during the past seven or eight years we have classified as diverticula all tumors of this sort, which may account for their apparent absence. However, I am convinced that the condition is sufficiently rare to warrant you in reporting your case."

Mrs. C., aged thirty-one, was brought to me at the Clarkson Hospital March 16, 1918, by Dr. Cameron, of Herman, Neb., because of a large sausage-shaped tumor lying transversely across the epigastrium. Five years before I had done an appendectomy upon this woman. The history was a brief one: The patient had for about two weeks complained of pain across the abdomen and beneath the costal borders; the bowels moved with difficulty after the use of cathartics; her doctor and she had noted an epigastric tumor for several days. The tumor was evidently the transverse colon, or better said, something within the transverse colon. The usual clinical evidences of intussusception were negative, except as to the form and position of the tumor. My own impression at first was that I had to deal with a fecal impaction—I could indent the swelling—and, strange to say, after the daily use of castor oil and atropine in broken doses, the swelling disappeared in four or five days. A movable kidney then was apparently recognizable. About one week after the disappearance of the tumor it reappeared. Realizing that we had to deal with either a recurring intussusception in the transverse colon, or some form of obstruction near the splenic flexure, an X-ray examination having shown that the bismuth enema only reached that location, an operation was determined upon.

The next day, after the patient was prepared for operation and etherized, it was noted that the tumor had disappeared. Upon section the transverse colon was found unnaturally immovable, and at several places of irregular calibre because of bands of "adhesions" similar to those of the "Jackson's Membrane" type, the caecum and ascending colon were very movable, more so than I can recall ever before seeing, and within the caecum nearly opposite the ileo-caecal valve was a sessile based tumor about the size of a kidney. The caecum was incised, the tumor proving to be a lipoma, was removed as one would in excising a lipoma from under the skin, only in this instance the mucosa of the bowel was cut and the tumor excised from within, the bed of the tumor obliterated with fine cat gut sutures and the caecal incision which had exposed the tumor, closed. This tumor was what I had mistaken for a movable right kidney, the kidney itself was found in its normal bed. The patient made an un-interrupted convalescence.

### Report of Case of Wandering Spleen—Excision.

The rarity of a wondering spleen can be attested in the fact that relatively few surgeons of large experience have met with the condition. In about fifty per cent of all cases a history of malaria can be elicited as a causative factor in adding to the weight of the organ, and when this is associated with a general condition of enteroptosis it is an easy and progressive step to the development of a wondering spleen which may by the stretching of its pedicle be found in any part of the abdomen. The danger of wandering spleen is torsion of the pedicle, and it is for the disagreeable cramp-like pain due to slight rotations that the possessor of these enlargements seeks advice which results in the finding of the movable enlargement with its smooth surface and nicked border, the splenic characteristic. All degrees of torsion of the pedicle have been met with, even twice 360 degrees. There seems to be a peculiar susceptibility to rupture of a wandering spleen during an attack of typhoid fever. As experience has shown that the spleen is not essential to life or good health, its removal in the instance of wandering spleen is the logical practice. Every true wandering spleen should be removed if there are no special contradictions, especially if the organ is enlarged. Attempts at fixation by gauze packing or suture are unreliable, the latter because of the tendency of the suture to tear out. Embedding the spleen in a pocket between the peritoneum and abdominal wall, making it a retroperitoneal organ, has been done but is not to be recommended. Nature never intended it.

Mrs. S., an Italian, age 42, was admitted to the University of Nebraska Hospital, March 4, 1918. She gave a history of irregular abdominal pains some of a rather severe character. Besides, she was generally run-down, this in a measure being due to rather irregular, painful uterine disturbances. Her general and family history were negative. There was a history of severe malaria attacks dating back to her residence in Italy. The urinary findings were negative, Wassermann negative, blood, Hb. 70%; R. B. C., 4,840,000; Leuc., 4,880. Physical examination disclosed a large, smooth, notched tumor, which could be manipulated around well within the general abdominal cavity but found a temporary resting place under the left costal arch.

Upon abdominal section this tumor proved to be a wandering spleen; near its hilum was a small "accessory spleen" which was removed with it.

The woman made an ideal convalescence, leaving the hospital in two weeks, when her blood findings were Hb. 80%; R. B. C., 5,050,000; Leuc., 9,400.

### Report of Case of Ruptured Ovarian Cyst.

This accident is most often the result of some pathological local degeneration of the cyst wall, this may be circulatory. The rupture may be spontaneous or following a trauma, but in either instance an examination usually will disclose a weak spot or area in the cyst wall. Rarely is it otherwise. This is my own experience.

The condition may be a very serious one, and again nothing of a life-threatening kind develops. There may be marked shock, or if the leakage is slow there may be practically no shock and in such instances few symptoms develop. When the fluid pours out into the abdominal cavity shock is usually severe, peritonitis may develop and death follow, or else the fluid is rapidly absorbed and eliminated by a polyuria. The physical diagnostic signs are positive, i. e., those of an ovarian cyst being changed into those of abdominal dropsy. In illustration:

Mrs. L., age 53, was seen by me in consultation with her physician Dr. Edmiston, in the Clarkson Hospital, Jan. 3, 1918.

The history was that about two years previously the patient noticed that her abdomen was enlarging. This continued until last spring, when she had an attack of severe pain in the lower abdomen, with same nausea and vomiting. The pain lasted intermittently for about two weeks, and then rather suddenly ceased and the patient felt as though "the abdomen was full of some fluid." No history of polyuria. A few weeks after this the swelling started again, and since then she had two similar attacks, one in August, 1917, and this last one. After the swelling receded she noticed each time a mass which she could feel in the right iliac fossa.

Upon examination, the physical signs of free fluid in the abdominal cavity were evident, and a tumor was likewise palpable in the lower right abdomen. The laboratory findings were negative.

Operation was postponed until Jan. 8th. Upon opening the abdomen a voluminous quantity of a hemorrhagic mucoid fluid was evacuated and a large, adherent ovarian cyst about one-half empty exposed; near its upper surface, attached to the transverse colon, was a hole about the size of a nickle. The tumor was removed. Upon examination of the cyst wall there seemed no cause to explain the rupture other than a thinning of its wall in the area of the rupture.

The woman made an uninterrupted recovery.

A word about the incision in ovariotomy; during the last several years it is being recommended and practiced by many surgeons following a bell-weather, to make the abdominal incision long enough, even if from symphysis to ensiform cartilage, to deliver the tumor entire. The reason given being that the growth may be a papilloma and if any of the contents are spilled into the abdominal cavity in the use of the trocar, secondary growths may develop. A good surgeon with a proper technique need not spill the contents of an ovarian cyst into the abdominal cavity in the preliminary evacuation of the cyst before its removal. An unnecessarily long abdominal incision is a mistake; we can never do better than nature when she has made no mistake. I would as soon think it necessary, as a few do, in doing a Caesarean section, to make a very long abdominal incision and deliver the uterus before incising it and removing the child.

---

### Coexisting Intra and Extra-Uterine Pregnancy.

J. W. Duncan, M. D., Omaha.

Mrs. Lena T., aged 35 years. Had four children. All deliveries normal. No miscarriages. Last period in February, 1915. During June of the same year the patient was lifting a heavy bucket of milk into a separator. The separator slipped and she made a sudden effort to prevent it falling upon her. She immediately felt an intense pain in the side, severe enough to cause her to cease working and necessitate her lying down for about two hours. From this date on she suffered more or less pelvic pain and during the first week in August found it necessary to call her local physician, and when first examined by him complained chiefly of pain in the back and constipation. Mucus and pus were present in the bowel movement and a slight odorless vaginal discharge. Bimanual pelvic examination at this time revealed a small non-fluctuating mass in the right adnexal region. Six months intrauterine conception revealed.

The mass soon presented itself in the culdesac and attained such a size as to make it difficult to reach the external os. There was now anorexia, persistent vomiting, loss of weight but no fever recorded until the last two weeks. Pulse about normal, and constipation grew worse.

The last week the rectal discharge ceased but the vaginal discharge increased and assumed an offensive odor. Obstipation was present for the last ten days and no water could be gotten into the lower bowel. The uterus was deviated to the left and the mass in the culdesac heretofore tense commenced to soften during the last three days.

The temperature now reached 101 degrees and pulse was slightly accelerated.

August 28th the culdesac was opened, and there was removed, in addition to clotted blood and psuedopus, a three months foetus and placental tissue.

At the first dressing two hours after the operation there was profuse drainage of detritus, subsequently in large part fecal matter.

Shortly after the operation the pulse and temperature commenced to rise and the patient died the following evening at 9:45. The intrauterine conception was living within four hours of the mother's death.

---

## Medical Organization for Government Service

War Committee of the A. M. A.:
Dr. J. L. Harris, Chicago, Ill.
Dr. A. R. Mitchell, Lincoln, Neb.
Dr. Herbert Work, Pueblo, Colo.
Dr. Geo. H. Simmons, Chicago, Ill.
Dr. Alex R. Craig, Chicago, Ill.

War Committee of the Nebraska State Medical Association:

Col. John M. Banister, Omaha.
Dr. John E. Summers, Omaha.
Dr. Ewing Brown, Omaha.
Dr. Chas. L. Mullins, Broken Bow.
Dr. Jos. M. Aikin, Omaha.

War Committees as the Unit in the State by Councilor Districts:

1st—Dr. A. P. Overgaard, Omaha, Councilor.
2nd—Dr. H. J. Lehnhoff, Lincoln, Councilor.
3rd—Dr. R. W. Fouts, Dawson, Councilor.
4th—Dr. A. E. Cook, Randolph, Councilor.
5th—Dr. R. E. Byers, Nickerson, Councilor.
6th—Dr. E. O. Weber, Wahoo, Councilor.
7th—Dr. W. L. Curtis, Fairbury, Councilor.
8th—Dr. W. J. Douglas, Atkinson, Councilor.
9th—Dr. Geo. I. Sellon, Broken Bow, Councilor.
10th—Dr. S. F. Sanders, Holdrege, Councilor.
11th—Dr. H. E. Mantor, Sidney, Councilor.
12th—Dr. A. J. Stewart, Mitchell, Councilor.

By this scheme each County Society names one member in the Councilor District War Committee. The Councilor District War Committee in conference with the State War Committee and A. R. Mitchell of the National War Committee have authority to recommend who should go into government service and who should remain to care for the civil, industrial and educational requirements. Every physician between 22 and 55 years of age is asked to apply for a commission in the M. R. C. If for any reason he is ineligible, he will be classed in the Volunteer Medical Corps with those over 55.

The twelve councilor district war committees composed of one member from each organized county, and chosen by that county society, will canvas their respective localities. This scheme was voiced in a resolution at a recent meeting in Johnson county in the third district. Dr. R. W. Fouts, councilor of that district, submitted it to Col. Bannister, chairman of our State Association War Committee, for criticism. The plan seemed simple and practical, thus gaining the full endorsement of our State War Committee. Secretary Overgaard of the Council submitted the endorsed resolution to each of our twelve councilors for their consideration. If a majority of our twelve districts adopt the suggested resolution it will coordinate and unify our work from the counties through the state into our national organization.

The eighth district, Dr. W. J. Douglas, councilor, reports having called a meeting of the several county societies in that district for consideration of the proposition.

The names of Nebraska Physicians, who are commissioned in the Medical Reserve have been reported from month to month in the Nebraska State Medical Journal. That list is more concisely tabulated, not only for Nebraska but for each state in the Union, in the June 1st issue of the American Medical Association Journal. By that table the total number of physicians in Nebraska to date is 1565, the number in the Medical Reserve Corps 312. This places Nebraska third in the percentage of physicians enrolled in the M. R. C.

Col. John M. Banister,
Dr. John E. Summers,
Dr. Ewing Brown,
Dr. Chas. L. Mullins,
Dr. Jos. M. Aikin,

War Committee of the Nebraska State Medical Association.

---

## The Fiftieth Annual Meeting of the Nebraska State Medical Association.

### PROCEEDINGS OF THE HOUSE OF DELEGATES

### First Session.

Omaha, Nebraska, Monday, May 6, 1918.

The House of Delegates assembled Monday, May 6th, in the Auditorium of the Fontenelle Hotel, Omaha, and was called to order by the President, Chas. L. Mullins.

In lieu of Roll Call, credentials were collected from the delegates, showing a quorum.

Moved by A. W. Montgomery, that inasmuch as the minutes of the 1917 session had been published in the State Journal, their reading at this time be dispensed with. The motion was seconded and carried.

The reports of Secretary, Treasurer and Librarian were read and referred to the Council.

The reports of committees presented by their chairmen and referred to the council, were:

Report of Committee on Scientific Work, Chairman, Joseph M. Aikin.

Report of Committee on Medico-Legal Defense, Chairman, A. S. von Mansfelde.

Report of Committee on Journal, Chairman, F. A. Long.

The following standing committees had no reports to offer at this time:

Committee on Public Policy and Legislation, Chairman, Chas. L. Mullins.

Committee on Care and Prevention of Contagious Disease, Chairman, B. W. Christie.

The following special committees made no report, no member of same being present:

Committee on Cancer.

Committee on Health and Public Instruction for Education Among Women.

No member of the Auditing Committee being present, President Mullins authorized Secretary Joseph M. Aikin to read their report. Upon motion, this report was referred to the Board of Councilors.

The report of the Committee on Incorporation of the Nebraska State Medical Association was presented by A. S. von Mansfelde. This report elicited an animated discussion, during which Mr. Harlan A. Bryant, attorney for the Medico-Legal Defense Committee, answered questions as to the advantages and disadvantages of incorporation. The report was referred to the Board of Councilors, for a report on Tuesday.

The Chairman of the Committee on Revision of the Constitution and By-Laws, A. D. Nesbit, asked for additional time, owing to the absence of a member of his committee. His request was granted by the House.

The matter of vacancies on the Board of Councilors was next taken up. It was the concensus of opinion of the House of Delegates that the members of the Council who were absent doing War Work should not surrender their seats in the Council by reason of such absence.

Moved by A. S. von Mansfelde that the member selected for District No. 1, Douglas-Sarpy counties, act temporarily in the absence of the Councilor from that district. Motion seconded and carried.

A. W. Montgomery was nominated for Chairman pro tem. The nominations were declared closed, and the Secretary instructed to cast the unanimous ballot of the House for A. W. Montgomery as chairman pro tem who then took the chair.

A letter from Captain Homer Davis, at Fort Riley, Kansas, regretting his inability to be present to deliver the address for which he is scheduled on the evening of the 7th, was read by the secretary.

Upon motion, the matter of a substitute for this address was left to B. W. Christie, chairman of the Committee on Arrangements.

Upon the suggestion of Chairman Montgomery, a motion was made that the minutes of the 1917 session as printed in the Nebraska State Medical Journal, be approved. The motion was seconded and carried.

Secretary Aikin read a letter from the Council on Medical Education of the American Medical Association, which upon motion, was referred to the President of the Association, with request that he name a committee, to be later reported to the House of Delegates.

Upon motion the House of Delegates adjourned to meet at 1 p. m., Tuesday, May 7, 1918.

Joseph M. Aikin, Secretary.

## HOUSE OF DELEGATES.

### Second Session.

Omaha, Tuesday, May 7, 1918.

Pursuant to adjournment the House of Delegates convened at 1 o'clock p. m. on Tuesday, May 7th. Called to order by A. W. Montgomery, Chairman.

Roll Call by the Secretary showed thirty-three accredited delegates present. This being more than a quorum, the session proceeded to the business of the day.

The minutes of the session of the evening of May 6th were read and with one or two slight corrections, were upon motion of Roy A. Dodge, duly seconded and carried, approved.

The letter from the American Medical Association regarding internships, referred to President Mullins at the previous evening session, was re-read, and the President announced his committee, as follows:

A. D. Dunn.
I. S. Cutter.
J. S. Welch.

On motion, this appointment was confirmed.

Chairman Montgomery then presented to the House for action the proposed amendments to the Constitution introduced at the last session of the House of Delegates in May, 1917.

It was moved by A. F. Tyler that we proceed, article by article, to the adoption of these changes recommended. The motion prevailed.

Chairman Montgomery presented Section 1, Article VIII, as follows:

Article VIIII. Officers. Section 1 reads as follows: The officers of this Association shall be a President, two Vice Presidents, a Recording Secretary, Treasurer, a Corresponding Secretary, and twelve Councilors.

To amend Article VIII, Section 1 of the Constitution of the Nebraska State Medical Association so as to read:

Section 1. The officers of this Association shall be a President, a President-Elect, two Vice Presidents, a Recording Secretary-Treasurer, a Corresponding Secretary and Librarian, and twelve Councilors.

Moved by A. D. Nesbit that Section 1, Article VIII, be adopted as read. Seconded by Chas. L. Mullins and carried.

Chairman Montgomery then presented to the House Section 2, Article VIII, as follows:

Article VIII, Sec. 2. Reads as follows: The President and Vice-Presidents shall be elected for a term of one year. The Secretaries, Treasurer and Councilors shall be elected for terms of three years each, the Councilors being divided into classes so that four shall be elected each year. All of these officers shall serve until their successors are elected and installed.

To amend Article VIII, Sec. 2, of the Constitution of the Nebraska State Medical Association, so as to read:

Section 2. The President, President-Elect and Vice Presidents shall be elected for a term of one year. The Secretary-Treasurer, Librarian and Councilors shall be elected for a term of three years each, the Councilors being divided into classes so that four shall be elected each year. All of these officers shall serve until their successors are elected and installed.

Chairman Montgomery called for a rising vote of all those in favor of the adoption of this amendment, nineteen responding, being a majority of the total number of registered delegates.

It was moved by A. F. Tyler, duly seconded and carried, that Section 2, Article VIII, as amended be adopted.

Chairman Montgomery declared the proposed amendments, Sections 1 and 2, Article VIII, adopted.

The next order of business was the report of A. D. Nesbit, Chairman of the Committee on Revision of Constitution and By-Laws. Chairman Nesbit proposed the adoption of the following addition to Section 6, Chapter 7 of the existing By-Laws:

"Provided, however, that in the absence from any session of a Councilor, the President may name a member from the District affected, to act as Councilor, pro tem."

The motion was seconded and carried.

Chairman Nesbit proposed the following addition to Section 4, Chapter 7, of the existing By-laws:

"They shall audit the books covering all the financial transactions of the Association."

The motion was seconded and carried.

Chairman Nesbit announced that Sections 3 and 4, Chapter 6, would be revised to cover existing conditions and presented at the next session.

Chairman Montgomery called for recommendations for the Nominating Committee, with the following results:

| | |
|---|---|
| 1st Councilor District | A. F. Tyler, Omaha |
| 2nd Councilor District | E. S. Wenger, Lincoln |
| 3rd Councilor District | R. W. Fouts, Dawson |
| 4th Councilor District | A. E. Cook, Randolph |
| 5th Councilor District | Morris Nielsen, Blair |
| 6th Councilor District | Frank Tornholm, Wahoo |
| 7th Councilor District | J. G. W. Westerhoff, Carleton |
| 8th Councilor District | |
| 9th Councilor District | G. I. Sellon, Broken Bow |
| 10th Councilor District | N. T. Johnson, Upland |
| 11th Councilor District | |
| 12th Councilor District | |

Moved by W. L. Curtis, seconded by A. S. von Mansfelde, that this nominating committee be approved. Motion carried.

The House of Delegates adjourned to meet at 7 o'clock p. m. this day.

Joseph M. Aikin, Secretary.

## HOUSE OF DELEGATES.

### Third Session.

Omaha, Tuesday, May 7, 1918.

Pursuant to adjournment, the House of Delegates was called to order by Chairman Montgomery, at 7:40 p. m. Roll Call showed thirty-eight accredited delegates present. This being sufficient for quorum, the House proceeded to the business of the session.

The minutes of the morning session of May 7th, were read by the secretary, and approved as read.

It was moved by Chas. L. Mullins that a committee of three be appointed to prepare Resolutions of Condolence to Colonel and Mrs. J. M. Banister, upon the loss of their son in France. The motion was seconded and carried. Chairman A. W. Montgomery appointed as members of this Committee, President C. L. Mullins, R. W. Fouts, and Roy A. Dodge, with request that they report Wednesday morning.

The proceedings of the Board of Councilors at their last session were presented to the House by its secretary, A. P. Overgaard. Referring to the report of the secretary of the Association, the Board of Councilors' report was as follows:

"I move you the report of the State Secretary be referred to the House of Delegates, with recommendation that the words in the last paragraph, Chapter 12, Section 1 of the By-laws, be changed to read as follows: 'Before or on January first of the current year.'"

Upon motion duly seconded and carried, the said recommendation was referred to the Committee on Revision of Constitution and By-Laws.

The remainder of the report of the Board of Councilors was adopted, section by section, without change.

A resolution recommending that the Nebraska State Medical Association go on record as favoring the selective draft of medical men was presented by W. J. Douglas. The adoption of this resolution was moved by R. W. Fouts. The motion prevailed.

The House of Delegates adjourned to meet at eight o'clock, Wednesday morning, May 8th.

Joseph M. Aikin, Secretary.

## HOUSE OF DELEGATES.

### Fourth Session.

Omaha, Wednesday, May 8th, 1918.

The House of Delegates convened at 8 o'clock a. m. Called to order by President Chas. L. Mullins. Roll call by assistant secretary Roy A. Dodge, showed a total of twenty-five members present.

The minutes of Tuesday evening, May 7th, were read by Roy A. Dodge, assistant secretary, and adopted as read. The report of the Nominating Committee was then heard. Its secretary read as follows:

To the Chairman and House of Delegates of the Nebraska State Medical Association:

We, your Committee on Nominations, beg to submit the following:

For President-Elect:
    Col. J. M. Banister, Omaha.
    Dr. Wm. L. Dayton, Lincoln.
    Dr. C. P. Fall, Beatrice.
For Vice-Presidents:
    Dr. A. I. MacKinnon, Lincoln.
    Dr. F. W. Buckley, Beatrice.
For Secretary-Treasurer:
    Dr. J. M. Aikin, Omaha.

For Corresponding Secretary and Librarian:
    Dr. Wm. P. Wherry, Omaha.

For Delegate to American Medical Association:
    Dr. J. M. Aikin, Omaha.

Alternate Delegate to A. M. A.:
    Dr. J. J. Hompes, Lincoln.

Delegate to Council of Medical Education:
    Dr. A. D. Dunn, Omaha.

Councilors:
    1st District: Dr. A. P. Overgaard, Omaha.
    2nd District: Dr. H. J. Lenhnhoff, Lincoln.
    3rd District: Dr. R. W. Fouts, Dawson.
    4th District: Dr. A. E. Cook, Randolph.

We also recommend the appointment of Dr. F. A. Long of Madison, to succeed himself on Journal Committee, and Dr. A. S. von Mansfelde of Ashland to succeed himself on Medico-Legal Defense Committee.

Respectfully submitted,
R. W. Fouts,
Secretary Nominating Committee.

The chair then gave opportunity for nominations from the House. None being offered, the House proceeded to the election of officers as per report of the Nominating Committee. President Mullins presiding, appointed as tellers R. W. Fouts, E. O. Weber and Roy A. Dodge.

The first office to be voted on was that of President-elect for the year 1919. There being 27 votes cast, necessary to a choice 14, the result of the first ballot was a tie between John M. Banister and W. L. Dayton, each receiving 12 votes. Upon the second ballot, John M. Banister received 12, W. L. Dayton 13. Upon the third ballot, John M. Banister and W. L. Dayton each received 15, out of 30 votes. The result of the fourth ballot was 16 votes each to John M. Banister and W. L. Dayton, out of 32 votes cast. The fifth ballot resulted in 18 votes for John M. Banister and 14 votes for W. L. Dayton. Chairman Mullins then declared John M. Banister, having received a majority of the votes cast, elected to the office of president-elect for the year 1919.

It was moved, seconded and carried that the nominations be closed and the secretary be instructed to cast the ballot of the House, electing A. I. MacKinnon of Lincoln, and F. W. Buckley of Beatrice, as vice presidents for the ensuing term.

Roy A. Dodge, assistant secretary, cast the ballot of the House as instructed. The chair then declared their election as vice-presidents for the year 1919.

There being no nominations from the floor, it was moved by E. O. Weber, seconded and carried, that the secretary be instructed to cast the ballot of the House for Joseph M. Aikin, as Secretary-Treasurer for three year period, commencing January 1st, 1919.

Roy A. Dodge, assistant secretary, cast the ballot of the House as instructed. The chair then declared his election.

There being no nominations from the floor, it was moved by A. W. Montgomery, seconded and carried that the secretary cast the ballot of the House for W. P. Wherry as Corresponding Secretary and Librarian, for the year beginning January 1st, 1919.

(Continued on page 190)

# THE NEBRASKA STATE MEDICAL JOURNAL

Published monthly by The Nebraska State Medical Association.

J. M. Aikin, Managing Editor............Omaha
A. F. Tyler, Associate Editor............Omaha
Room 476 Brandeis Building.

Publication Board.

F. A. Long, Chairman............Madison
W. O. Bridges............Omaha
B. F. Bailey............Lincoln
J. M. Aikin, Ex-Officio............Omaha

Subscription $2.00 Per Year. Single Copies 20c Each

Address all communications to The Nebraska State Medical Journal, 476 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. III. June, 1918. No. 6

## Journal Announcement.

The Publication Board in its report to the annual meeting of the Nebraska State Medical Association last month announced a definite constructive policy with centralization of activities as the keynote, and by the adoption of the report the seal of approval was placed on the policy outlined by the committee.

Rooms 466 and 468 Brandeis Building have been leased for the Journal and Secretary-Treasurer's offices, jointly, and will be to all intents and purposes the headquarters of the Nebraska State Medical Association and of its Journal.

A competent full-time stenographer and general office assistant will be "at home" to Journal friends and patrons and Association members, every week-day.

Dr. J. M. Aikin, from the launching of the Journal, business manager, has been made the directing head, under the broader title of Managing Editor, and Dr. A. F. Tyler, with the title of Associate Editor will have editorial supervision of the scientific material.

The Publication Board and the Association Members are under many obligations to Dr. Irving S. Cutter, retiring editor, for his able and forceful editorial supervision of the Journal from its inception to the present time. As Dean of the Nebraska School of Medicine and head of the University Hospital, Dr. Cutter's duties are so many that the Publication Board felt it to be an imposition to ask him to continue as editor.

The publication date of the Journal is the fifteenth of the month, and subscribers and members may henceforth expect their Journal within three days of that date.

F. A. Long, Chairman.
W. O. Bridges.
B. F. Bailey.

## Keep Our Honor Roll in Sight.

The Journal has from month to month printed the lists of our M. R. C. members as they have been furnished from the Surgeon General's office. In the Journal of the A. M. A. issue of June 1st may be found the most complete record of the medical profession in the United States that has ever been published. It contains valuable data from each state. In the percentage of physicians enrolled in the M. R. C. Nebraska stands third in the Union. Arizona and Nevada have first and second places respectively. The state and district plan outlined by our War Committee in this issue of the Journal stands for organized and unified work. Questionnaires sent direct from the American Medical Association office to each physician will enable all our membership to be tabulated on a card index stating our several qualifications. That information will be at the disposal of our National War Committee. Our county societies through their councilor district war committee report to our state war committee the number, names and addresses of those who can be spared without injustice to the civil, industrial and educational necessities of their respective localities. The call for service will issue from the War Department at Washington direct to each physician made from data compiled from county, district and state war committees to our national headquarters in Chicago. This will avoid the existing plan of taking all the physicians from a sparsely settled locality and few or none from the more congested centers where conditions enable one physician to serve a much larger number of people.

## Our Birth and Growth.

In June, 1868, the Nebraska State Medical Association was organized. The charter members were Dr. G. C. Monell, Dr. R. R. Livingstone, Dr. D. Whittinger, Dr. Aug. Roeder, Dr. H. P. Mathewson, Dr. J. B. Andrews, Dr. J. H. Peabody, Dr. S. D. Mercer, Dr. J. C. Denise and Dr. N. B. Larsh, ten in number. Our organization, completed only fifteen months subsequent to Nebraska becoming a state, was a compliment to the progressive spirit of the medical profession. These pioneers who signed the first roll served well in their day and generation. They were known personally to some, and by reputation to many, whose names are on our present roll of membership. Of their number two, possibly more, had served as surgeons in our Civil War. Our present roll of membership is 1059 out of 1565 physicians reported in the state. Our enrollment to date in the M. R. C. is 312. Obviously the spirit of altruism remains the controlling force in our profession. Constructive, not destructive service, has ever been our guiding star. If the present war is more cruel than preceding wars, it is also true that our facilities for serving humanity were never equal to our present opportunities. At government expense our physicians in the service are receiving better post-graduate courses than they could obtain from private schools.

## The Supreme Court Decision on the Corporate Rights of the American Medical Association.

In 1910 the state's attorney of Cook county (Chicago) was petitioned to institute "quo warranto" proceedings against the American Medical Association on the grounds that the Association's affairs were being conducted illegally in that its officers were elected at annual sessions held outside of the state of Illinois. The state's attorney refused to take action in the matter, and later, the attorney general of the state, who was appealed to, also refused to act. January 5, 1911, mandamus proceedings were begun in the Circuit Court of Cook county, Illinois, to compel the state's attorney to initiate the quo warranto action which he had declined to institute. Until December 20, 1915, the issue was between the parties asking for the "mandamus" and the state's attorney of Cook county, Illinois; the point at issue being the technical one as to whether the state's attorney was compelled to act or had discretionary authority in the matter. The case went through the lower courts and finally was carried to the Supreme Court of Illinois, which in December, 1915, refused to hear arguments on the merits of the cause as it related to the American Medical Association, but ordered the Circuit Court to take up the original quo warranto proceedings designed to raise the question of whether or not Illinois corporations "not for profit" are compelled to hold their elections and conduct their business within the confines of the state. Up to this point the American Medical Association was not technically interested in the controversy; now, however, it became a party in the action. Quo warranto proceedings against the members of the Board of Trustees were instituted in the Circuit Court of Cook county, Illinois, which after trial rendered a decision favorable to the Association. The case was then carried to the Appellate Court of Illinois, which confirmed the decision of the Circuit Court. An appeal was finally made to the Supreme Court of Illinois, which last week (April 16) rendered its decision, settling the question. This decision is entirely satisfactory so far as the Association is concerned. One paragraph of the opinion reads:

> It seems reasonably to follow that if a corporation not organized for pecuniary profit may hold meetings at stated times outside of the state of Illinois, composed of delegates selected by the constituent associations, for the transaction of business of the corporation, it is not unlawful to authorize and provide for the election by said house of delegates of trustees of the corporation. The American Medical Association was organized solely for the purpose of the advancement of medical science. Its purpose was to improve methods for the treatment and prevention of diseases of the human race. Its usefulness for these purposes would be seriously interfered with, if not absolutely destroyed, if it could not provide for the election of trustees from the most efficient men in the association throughout the United States, by delegates selected by the constituent associations from the various States in the Union. Such authority to the house of delegates is conferred by the by-laws and is not in conflict with or prohibited by the constitution or laws of Illinois relating to corporations not for pecuniary profit.

The decision is important not only to the American Medical Association, but also to all organizations incorporated under the law of Illinois—in fact of any state—governing corporations "not for profit."

## Acidum Acetylsalicylicum, Not "Aspirin."

A recently published report from the A. M. A. Chemical Laboratory demonstrates that the quality of the product sold under its real name "acetylsalicylic acid" is as good as, if not better than, that sold under the proprietary name "aspirin." The report also shows that more is charged for the preparation under its fancy name than when it is bought under its correct, descriptive title. Commenting on the report, the Journal of the American Medical Association remarks editorially:

> Every consideration of public interest, of patriotism and of ordinary common sense should prompt physicians to specify acetylsalicylic acid in writing prescriptions.

In addition to these reasons for the use of the correct name for this product, there is another: If the term "aspirin" is used, the patient will recognize that a "patent medicine," now the subject of an extensive newspaper advertising campaign, is being prescribed for him, and in the future he will prescribe it for himself and his friends whenever he imagines that he or they need the drug. The objections to this indiscriminate use by the public was well brought out in the report of the Council on Pharmacy and Chemistry when, because of the lay advertising campaign, it announced the deletion of Aspirin-Bayer from New and Nonofficial Remedies:

> The public does not know, as physicians do, that headaches are merely symptoms of other, sometimes very serious conditions; and that they are often the signal for the need of a thorough physical examination and diagnosis. It is true that they are often also the symptoms of very minor derangements, which will right themselves spontaneously; and that, in such cases, drugs like aspirin may give relief and may do no harm. The patient, however, is not educated to distinguish one class from the other, and therefore anything that tends to promote the indiscriminate use of such remedies as aspirin is detrimental to the public health. Furthermore, aspirin itself is not always harmless. Alarming idiosyncrasies are sufficiently common that the use of the first doses, at least, should require medical supervision.

We appeal to the physicians of Nebraska to substitute in their prescriptions the term "acidum acetylsalicylicum (abbreviated "acid. acetylsalicyl.") for the "patent medicine" name "aspirin."

## Physicians Should Give Preference to Pharmacopeial Titles.

If a drug is obtainable under an official title and also under a proprietary name, physicians should use the first and avoid the second. They should do this because patients are less likely to learn the identity of a drug prescribed under its pharmacopeial name obtain it on their own initiative, and thus become habituated to the dangerous practice of self-medication. Furthermore, by the use of pharmacopeial nomenclature, physicians will secure drugs of standard quality for their patients at a cost much below that asked for the proprietary brand.

That patients quickly become familiar with names such as "phenacetin" and "sulphonal," and make use of this familiarity to their own detriment, every practicing physician knows from experience.

The fact is well shown by reports from the A. M. A. Chemical Laboratory that fancy prices are charged for drugs sold under proprietary names. Thus an investigation of the market supply of phenacetin and acetphenetidin disclosed that, while under the first name the price was five times the amount charged for the product when sold under the second, the pharmacopeial name, there was no demonstrable difference in quality (Jour. A. M. A., March 16, 1912, p 801). Again, an examination in the A. M. A. Chemical Laboratory showed that "Diuretin," though sold at $1.75 an ounce, was not superior to the non-proprietary brands sold under the descriptive name of theobromine sodio-salicylate at from 35 to 45 cents an ounce (Jour. A. M. A., April 4, 1914, p 1108).

It is urged that in the interest of rational medicine and economy, physicians prescribe acetanilid (acetanilidum) and not "antifebrine;" acetphenetidine (acetphenetidinum) and not "phenacetine;" sulphonmethane (sulphonmethanum) and not "sulphonal;" sulphonethylmethane (sulphonethylmethanum) and not "trional;" hexamethylenamine (hexamethylenamina) and not "urotropin;" theobromine sodio-salicylate (theobrominae sodio-salicylas) and not "diuretin," etc., etc.

## Omaha's New Health Commissioner.

A hopeful sign of the times is the appointment of Dr. E. T. Manning as Health Commissioner of the city of Omaha. For many years this office has been considered a political plum and the incumbent tied hand and foot with the fortunes of the "City Hall Gang."

In justice to the late incumbent who automatically went out on the political landslide, he must be credited with the inauguration and enforcement of a number of salutary health regulations along progressive lines.

Mr. Ringer, the newly elected Commissioner in charge of Health, Sanitation and Police, a lawyer by profession, and a graduate of the University of Nebraska, chose as Health Commissioner a man recommended for the position by a committee appointed by the Douglas County Medical Society. Mr. Ringer had the unanimous support in this appointment, of the other commissioners. The mayor, Mr. Smith, says, "all that is asked is that the new appointee make good." This we predict he will do, as Dr. Manning is an up-to-date physician, a student of public health affairs, and a bacteriologist of no mean ability. Added to this, he is an energetic, tactful, cultivated gentleman.

We predict that many desirable changes for the good of the citizenship of Omaha will be inaugurated and reasonably enforced through the qualifications of the new appointee backed by the power of the city government.

### War Conference of Secretaries of the Constituent State Associations of the American Medical Association.

That conference held in Chicago, April 30, 1918, reported fully in the May 4th-11th-18th issues of the A. M. A. Journal, was of vital interest to the medical profession. The plan evolved for coordinating and mobilizing the physicians in the United States is embodied in the following resolution:

Moved that the secretaries of state medical associations request the presidents of their respective state associations to appoint a war committee of three immediately, one of whom may be the secretary of the state association, for the purpose of coordinating the profession of each state for war work.

Motion seconded and carried.

Dr. I. C. Chase, Texas, moved that the conference request the War Board, after conference with the Surgeon-General, to draw up a form of questionnaire as a guide for the collection of the data regarding individual doctors throughout the United States.

### Sixteen Vacancies on Staff of Omaha School Nurses.

Omaha's present staff of twenty school nurses will be reduced to four by the end of the school year through the enlistment of sixteen nurses in the Red Cross nursing service for overseas duty.

Miss Charlotte Townsend, director of nurses, will announce shortly the nurses who will go. Their places will be filled at the close of the school year.

### Dr. A. J. Brown of Creighton Goes to War.

Dr. Alfred J. Brown, major U. S. A. medical reserve, left Wednesday for an Atlantic port to sail for the war front. He has been three months in Omaha and acting head surgeon of St. Joseph's hospital and also professor of surgery at Creighton medical college.

### Trial Tubes of Chlorazene.

It is interesting to learn that The Abbott Laboratories of Chicago are sending to physicians, on request, convenient trial tubes of ten Chlorazene tablets. In view of the growing importance of the Dakin discoveries, we suggest to our readers that they avail themselves of this generous offer.

### NOTICE.

We are in need of the following copies of the Nebraska State Medical Journal: July, 1916; March, April, May and October, 1917. If any one has these copies to spare, we would appreciate having them sent in to Nebraska State Medical Journal, 476 Brandeis Bldg., Omaha, Nebraska.

Our War Committee for Nebraska, Col. J. M. Banister, J. E. Summers, Ewing Brown, Chas. L. Mullins and Joseph M. Aikin, request each county to name a similar committee for personal work in their respective counties. Through this chain of organized effort, every physician between 22 and 55, will be tabulated on a card index in our A. M. A. in Chicago.

Fill the questionnaire blank as asked, mail it direct to the A. M. A. office, apply at once to your nearest medical examiner, and become enrolled, either as qualified physically and mentally, or disqualified, for Army or Navy service. On your card will be noted your special fitness for the kind of service you desire. With that tabulated record on file, the Surgeon General can ask the A. M. A. War

Committee for the names and addresses of 50 surgeons, 100 internists, 20 X-ray men, and write direct, calling them to report at a given date at a certain place for work.

To our War Committee for the state is entrusted the duty of helping counties to organize and decide difficult questions on who should or should not remain at home to care for the civil, industrial and educational needs of any community.

Captain E. W. Rowe, writing from Cornell Medical College, New York, expresses enjoyment, enthusiasm, and great profit from the special training given there. He voices the same spirit for other members of Base Hospital Unit 49, the University of Nebraska Unit. That spirit is voiced in his words "anxiously awaiting sailing, and do not want to return until the German Nation has been crushed, if it takes my life. To me this is a Holy war, and I feel, as other officers no doubt, a little as the Crusaders of Old."

At a cost of about ninety dollars a month the North Carolina State Board of Health spreads its propoganda on disease prevention throughout its country districts. The equipment consists of an auto truck, an extra gasoline engine for supplying current to a motion picture projector, and a camping outfit for two.

Sheet mica has been recommended as a dressing for wounds. Split to almost any degree of thickness, it is put over a wound, to which it neither sticks nor acts as an irritant. Also the condition of the wound may be viewed through its transparent covering, thus avoiding the danger from infection.

The first and only bearing camphor plantation of any size in this country is located at Satsuma, Fla. It contains 2,000 acres of trees which last year yielded 10,000 pounds of crude camphor.

The Midsummer meeting of the Elkhorn Valley Medical Society will be held at Norfolk, Neb., on Tuesday, July 16th, 1918. A golf match is on the card for early in the morning.

A nine pound girl was born to Dr. and Mrs. Blaine A. Young, of Merriman, Nebraska, May 18th, 1918.

## The Fiftieth Annual Meeting of the Nebraska State Medical Association.

(Continued from page 185)

Roy A. Dodge, assistant secretary, cast the ballot of the House as instructed. The chair then declared his election.

There being no nominations from the floor, it was moved, seconded and carried that the secretary cast the unanimous ballot of the House for Joseph M. Aikin as delegate and J. J. Hompes as alternate, to American Medical Association, for two year period.

Roy A. Dodge, assistant secretary, cast the ballot of the House as instructed. The chair declared these delegates elected.

There being no nominations from the floor, it was moved, seconded and carried that the secretary cast the unanimous ballot of the House for A. D. Dunn as delegate to the Council of Medical Education of the American Medical Association, for one year.

Roy A. Dodge, assistant secretary, cast the ballot of the House as instructed. The Chair then declared his election.

It was moved, seconded and carried that the secretary cast the unanimous ballot of the House for A. P. Overgaard, of Omaha, Councilor from 1st District; H. J. Lehnhoff, of Lincoln, Councilor from 2nd District; R. W. Fouts, of Dawson, Councilor from 3rd District, and A. E. Cook, of Randolph, Councilor from 4th District.

Roy A. Dodge, assistant secretary, cast the ballot of the House for these four Councilors from their respective districts, as instructed. The Chair then declared their election.

It was moved by assistant secretary Roy A. Dodge, that the recommendations of the nominating committee be concurred in, and that F. A. Long succeed himself as chairman of the Journal Committee, and that A. S. von Mansfelde succeed himself on the Medico-Legal Defense Committee. The motion, duly seconded prevailed.

At this time, Chairman Mullins called A. W. Montgomery to preside.

The following resolution was presented by H. M. McClanahan, who moved its adoption:

"Mr. President and Members of the House of Delegates: In appreciation of the large number of our colleagues who are giving their lives and services in the Medical Reserve Corps, to the cause of our country in this war, we send Greetings from our Association, with best wishes for their good health and their safe return when Victory is complete."

Upon motion, this resolution was unanimously adopted.

It was moved by Joseph M. Aikin, seconded by A. S. von Mansfelde, that B. W. Christie, secretary of the Medical Section, and J. S. Welch, secretary of the Surgical Section, be advanced from their positions as secretary of their respective sections, to the chairmanship of those sections. The motion prevailed.

A. P. Overgaard, secretary of the Board of Councilors, then reported the Council meeting of Tuesday evening, May 7th. The attention of the House was called to the fact that the report did not provide for the salaries of Secretary and Treasurer during the intervening eight months between the Annual Meeting and January 1st, 1919, the date when the appropriations in the budget go into effect. With that correction, the report of the Council was adopted.

A. D. Nesbit, chairman of the Committee on Revision of Constitution and By-Laws, presented the final report of that Committee, as follows, and moved its adoption:

Sections 3 and 4 of Chapter 6.—Duties of Officers, to read as follows:

Sec. 3. The Secretary-Treasurer of the Association shall execute and deliver a surety bond in the sum of Two Thousand ($2,000) Dollars, and the expense of procuring such bond shall be paid out of the Association funds. He shall demand and receive all funds, except as hereinafter provided, due the Association, together with the bequests and donations and receipt for the same. He shall under the direction of the Board of Trustees, sell or lease any estates belonging to the Association, and execute the necessary papers and shall in general, subject to such direction, have the care and custody of the finances of the Association. He shall pay money out of the Treasury only on a written order of the President, provided that such orders shall be effective only for the year in which they are made, and shall provide that all unexpended balances must be covered back into the Treasury of the State Association at the end of each year. Provided, further, that the Secretary-Treasurer shall have the right to exercise the prerogative of paying orders by installment, when made, for the committees of the Association, such deferred payment not to interfere with the efficacy of the work. He shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands. He shall charge upon his books the assessments against each component county society at the end of the fiscal year, and perform such other duties as may be assigned to him.

Sec. 4. The Secretary-Treasurer, acting with the Committee on Scientific Work, shall prepare and issue programs for and attend all meetings of the Association and of the House of Delegates and he shall keep minutes of respective proceedings in separate record books. He shall be custodian of all record books belonging to the Association. He shall collect and keep account of all funds of the association which come into his hands except as hereinafter provided. He shall provide for the registration of the members and delegates at the annual session. He shall keep a card index register of all the legal practitioners of the state by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies and in the extension of the powers and usefulness of the association. He shall conduct the official correspondence, notifying members of the meetings, officers of their election, and committees of their appointment and duties. He shall act as chairman of the Committee on Scientific Work. He shall employ such assistants as may be ordered by the Council for the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary-Treasurer may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he receive some compensation. The amount of his salary shall be fixed by the House of Delegates. The Secretary-Treasurer shall appoint an assistant secretary who shall assist him in the discharge of his duties and who shall serve without pay.

Sec. 5. The Corresponding Secretary and Librarian shall review such transactions of the other medical societies as he may receive, and present at each annual meeting a report of such matters contained in these transactions as he may deem of interest to this Society. He shall deliver to his successor in office all transactions in his hands.

Section 6. The duties of all officers, standing committees, and employes in any department of our Association work, shall begin the first day of the calendar year immediately following the Annual Association meeting at which they were elected, and terminate with the last day of the calendar year immediately following the annual association meeting corresponding to the term of their office. All their reports shall cover the year ending December 31st just preceding the Annual Association meeting.

Chapter 1, Sec. 7. All dues should be paid by January 1st, if not paid on or before January 1st, thirty days grace will be allowed when member will become delinquent.

Motion seconded and these By-Laws adopted as amended.

Moved by F. A. Long, seconded by A. S. von Mansfelde, and carried that the next meeting of the Nebraska State Medical Association be held in Lincoln.

The Committee on Resolutions reported by its chairman, R. W. Fouts, as per copies found elsewhere in this issue.

It was moved and seconded that these resolutions be adopted by a rising vote. The motion prevailed.

The question of support by the House of Delegates of the Medico-Legal Defense Committee, in offering the sum of One Hundred Dollars in attorney fees toward the defense of Doctor S. A. Swenson, was brought before the House by Joseph M. Aikin, secretary of the committee. A. S. von Mansfelde, chairman, spoke for the Committee, giving its reasons why it unanimously agreed that one hundred dollars was a just fee on its behalf toward this case. Dr. Swenson then presented his contention for One Hundred and Fifty Dollars, the sum originally agreed upon by the Committee, and afterward refused, because of the changed status of the case when brought to trial. The House sustained the contention of Dr. Swenson, and instructed the Medico-Legal Defense Committee to pay Dr. Swenson One Hundred and Fifty ($150.00) Dollars for attorney fees.

The House then gave audience to Major Jump, from the office of Surgeon General Gorgas, who addressed the convention in behalf of the Medical Reserve Corps.

On motion, the House of Delegates adjourned sine die.

Joseph M. Aikin, Secretary.

## PROCEEDIINGS OF BOARD OF COUNCILORS

### First Session.

Omaha, Nebraska, Monday, May 6, 1918.

At the Fontenelle Hotel, Monday evening, immediately following the adjourned meeting of the House of Delegates, the Council met and organized. Upon motion, H. J. Lehnhoff was elected president pro tem, and A. P. Overgaard, secretary pro tem.

The following members responded to roll call: A. P. Overgaard, H. J. Lehnhoff, E. O. Weber, W. L. Curtis and A. J. Stewart.

The report of the State Secretary was read by Secretary A. P. Overgaard, and upon motion made and seconded, was referred to the House of Delegates, with the recommendation that the words in the last paragraph Chapter 12, Section 1 of the By-Laws, be changed to read as follows: "Before or on January first of the current year."

Upon motion, duly seconded and carried, the following reports were received, considered, and referred to the House of Delegates with recommendation for their adoption:

Treasurer's Report.
Report of Committee on Scientific Work.
Report of Committee on Medico-Legal Defense.
Report of Committee on Incorporation.
Report of Committee on Journal.
Report of Auditing Committee.

The Council adjourned, to meet at the call of the Chair.

A. P. Overgaard, Secretary.

## BOARD OF COUNCILORS.

### Second Session.

Omaha, May 7, 1918, Tuesday p. m.

Pursuant to adjournment, the Board of Councilors met at 5:30 p. m. There were present: H. J. Lehnhoff, president; A. J. Stewart, secretary pro tem; W. L. Curtis, W. J. Douglas, Lucien Stark, E. O. Weber, S. F. Sanders, C. D. Barnes.

The Minutes of the previous meeting were read and approved as read.

Secretary Stewart presented a resolution introduced by W. J. Douglas, as follows:

We, the members of the Councilor Body of your Association, believe we have reached the time in our war crisis and what the medical profession of Nebraska stands for must be assured in some definite recommendations which must be put in such shape that they will stand for absolute force, power and authority of this Association—to see that the public health and welfare of this state will not lack for proper care and professional attention in localities where men are patriotic enough to leave their homes and lucrative practices for their country's cause. We believe this society should endorse a policy whereby men from the larger communities can be drafted and forced to take the place of these rural men, who form the large majority of the more than three hundred physicians taken from Nebraska in the Medical Reserve Corps and who have entered the Army Service.

Inasmuch as the government has called for a total of two hundred additional men from this state, it is absolutely necessary that these two hundred be taken from centers having a large population of doctors, and to this end we recommend that this Society go on record as favoring the selective draft based on questionnaire to the doctors of this state and be empowered to appoint any doctor not needed for military service to service in the country communities where the profession is weakened by the loss of necessary medical attendants.

(Signed) W. J. Douglas.

Upon motion of Lucien Stark, seconded by E. O. Weber, the resolution was unanimously adopted with the recommendation that it be passed to the House of Delegates for favorable action.

Moved by W. L. Curtis, seconded and carried, that the Treasurer's report in full, be received and presented to the House of Delegates with the recommendation that it be adopted.

The Council adjourned to the call of the President.

A. P. Overgaard, Secretary.

## BOARD OF COUNCILORS.

### Third Session.

Omaha, Tuesday, May 7, 1918.

Pursuant to adjournment and immediately following the adjournment of the House of Delegates, the Council met and was called to order by President H. J. Lehnoff, Tuesday evening.

The following members responded to Roll Call: H. J. Lehnhoff, president; E. O. Weber, W. J. Douglas, Lucien Stark, A. P. Overgaard.

It was moved by E. O. Weber that the budget for 1919 be made up as follows, and that it be submitted to the House of Delegates with the recommendation for its adoption:

| | |
|---|---|
| State Medical Journal, per subscriber | $ 1.50 |
| Committee on Public Policy and Legislation | 200.00 |
| Secretary's Office, expense | 425.00 |
| Salary of Secretary-Treasurer | 350.00 |
| Salary of Secretary (8 months May to Dec. incl., 1918) | 200.00 |
| Salary of Treasurer (8 months May to Dec. incl., 1918) | 33.33 |
| Secretary's Office Expense, (8 months May to Dec. incl., 1918) | 266.67 |
| Treasurer's Office Expense, (8 months May to Dec. incl., 1918) | 16.67 |
| Librarian's Expenses | 25.00 |
| Salary of Chairman of Medico-Legal Defense Committee | 300.00 |
| Expenses of Chairman of Medico-Legal Defense Committee | 200.00 |
| Official Stenographer for 1918 session | 150.00 |
| Total | $2168.17 |

The motion was duly seconded and carried.

A vote of thanks was unanimously extended to the Fontenelle Hotel management for their courtesies, and also to the Omaha-Douglas County Medical Association for the splendid entertainment given this Association during its meeting.

Moved by A. P. Overgaard, seconded by W. J. Douglas, and carried, that the Council adjourn, to hold its final session after the meeting of the House of Delegates, May 8th.

A. P. Overgaard, Secretary.

## BOARD OF COUNCILORS.

### Fourth Session.

Omaha, May 8th, 1918, Wednesday.

The Council convened at 12 o'clock. Called to order by President H. J. Lehnhoff. Responding to Roll Call were: H. J. Lehnhoff, W. L. Curtis, A. J. Stewart, A. E. Cook, R. W. Fouts, W. J. Douglas and A. P. Overgaard.

The Council for 1919 was organized as follows: H. J. Lehnhoff, president; A. P. Overgaard, secretary. The duties of each member were discussed and emphasis placed upon what each should do to further the enlistment of physicians from his district.

Council adjourned, sine die.

A. P. Overgaard, Secretary.

## RESOLUTIONS OF RESPECT AND CONDOLENCE.

Whereas, Col. John M. Banister and family have contributed to the present war the supreme sacrifice in the person of their son, John M. Banister, Jr., who being possessed with that true patriotism which prompted him to enter the service with the Canadian forces in the fight for justice and humanity, ere his own country was involved, and that while we feel the pride in such a son is theirs alone, we hope that this recognition, together with the sympathy of their many friends, may in some small measure help to sustain them.

Realizing that many of us may soon be called upon to make a similar sacrifice, we, the members of the Nebraska State Medical Association, feel a close bond of sympathy with this bereaved family.

Therefore, Be It Resolved, That a copy of this resolution be spread upon the permanent records of this Association, that they be printed in The Nebraska State Medical Journal, and that a copy be sent the bereft family.

C. L. Mullins,
Roy A. Dodge,
R. W. Fouts.

## RESOLUTION.

Believing that the time has arrived when it is necessary that we, the Council Body of the Nebraska State Medical Association, should make some recommendations as to the action of this society in regard to the need of additional physicians in the Medical Reserve Corps, and the needs of the civilian population.

Therefore, we recommend that the house of delegates adopt the following resolutions:

Be It Resolved, by the Nebraska State Medical Society that they favor the drafting of all physicians of this state into the medical service of our country, based on a questionnaire, and realizing that the larger portion of the 385 physicians now in the service, came from the rural districts and also realizing the needs of the rural communities from a medical stand point, and the fact that certain rural communities are now lacking the necessary medical attendants, believe that the necessary physicians for the Army and Navy should of necessity be taken from the cities having a large medical population, or should be drafted into the service in such manner that they will be obliged at least to go to the relief of certain rural communities in need of medical attendants.

W. J. Douglas,
Councilor 8th District.

## RESOLUTION.

Whereas, The members of Adams County Medical Society contribute to a fund to provide for legal defense from malpractice suits against its members, and

Whereas, Such suits are local in character requiring personal knowledge of details and parties involved thus making local council necessary for safe and efficient defense, and

Whereas, The disclosure of evidence and related facts as required by the present arrangement is prejudicial to the interests of the defendant, and

Whereas, Knowledge by the jury, as usually brought out by council for the prosecution, that defendant is protected by such a fund which is misconstrued as insurance whereby plaintiff may receive damage without working a hardship on the defendant individually, and

Whereas, Relatively few members who are sued avail themselves of the defense afforded by said fund for reasons before mentioned and for many others, There, Be It

Resolved, That we declare the medical defense now furnished by the State Medical Association ineffective and inimical to the interests of the members of the Society and that it tends to prejudice the jury and defeat the purpose for which it exists, be it further

Resolved, That we instruct our delegate to the next meeting of the State Association to use every honorable means to abolish said legal defense. Be it further

Resolved, That copies of this resolution be mailed to the secretaries of the various county societies.

E. B. Hamel,
C. R. Spicer,
James V. Beghtol,
Committee.

535 North Dearborn St., Chicago, May 4, 1918.

Dr. Joseph M. Aikin, Secretary, Nebraska State Medical Association, Omaha, Neb.

Dear Doctor Aikin:

The Council on Medical Education is continuing its survey for the purpose of determining what hospitals in the United States are qualified to furnish satisfactory internships. The fact that seven medical schools and seven state licensing boards have adopted the requirement of a fifth or intern year for graduation or licensure, and the certainty that other schools and state boards will follow their example, necessitates a more complete survey of the hospitals than has thus far been conducted.

In making such a survey, it is extremely important that we have in each state a good, strong advisory committee, made up of doctors who are thoroughly acquainted with the hospital situation in their respective states, who are vitally interested in the problem of the relation of hospitals to medical education, and who will act in an advisory capacity with the Council in its investigation of the hospitals.

Will you kindly have your State Society appoint a committee on Hospitals to aid in this important work? A strong active committee in your state can render valuable assistance.

Awaiting with interest your reply, we are

Very truly yours,
Council of Medical Education,
Per N. P. Colwell, Secretary.

Committee appointed as per above request, by President C. L. Mullins, and ratified by House of Delegates, as follows:

A. D. Dunn, Chairman, 615 City Nat'l Bank Bldg., Omaha, Neb.

I. S. Cutter, 42nd & Dewey Ave., Omaha, Neb.
J. S. Welch, 1st National Bank Bldg., Lincoln, Neb.

## REPORT ON INCORPORATION.

As a general rule, all voluntary associations which are not incorporated are partnerships. They are not always ordinary partnerships, but they fall within the general definition of such an organization, and are governed by the rules relating to them, except in so far as provision to the contrary may be made by statute, or by the articles of association. We have no statutory provision recognizing us as the Nebraska State Medical Association, nor are there any statutory powers conferred upon us as such. We therefore fall into that class of voluntary associations known as partnerships and are such in law and in fact. Not, of course, the commercial partnership, but one organized solely for the betterment of our profession and society.

A corporation, on the other hand, cannot be created by mere agreement on the part of its members alone, but requires special authority from the state. This is specifically provided.

The only characteristic which in all cases distinguishes a corporation from unincorporated associations is the merging of the individuals who compose the corporation into a distinct artificial existence, separate and apart from its members, creating thereby the capacity of succession of different persons which shall be regarded in law as one and the same body, and which may, at all times, act in the fulfillment of the objects of the association as a single individual.

An ordinary common-law partnership is dissolved by the death or withdrawal of a member. The existence and identity of the firm is affected. In the case of a corporation, by reason of the capacity of succession, it is very different. If a member dies or withdraws, neither the existence nor the identity of the corporation is in the least affected, but it remains the same identical corporation. There is a class of partnerships which have a continuity of existence, and are not within the ordinary rule, and it may be that, by reason of the nature and purpose of our organization, we have such a partnership, but we are nevertheless, in no sense, a corporation.

If a statute imposes, tax or other liability, or confers rights, upon "corporations" using that term, it applies only to associations which are corporations in a legal sense. The law of our state is as follows:

§566. "Every corporation, as such, has power:

First—To have succession by its corporate name.

Second—To sue and to be sued, to complain and defend in courts of law and equity.

Third—To make and use a common seal, and alter the same at pleasure.

Fourth—To hold personal estate, and all such real estate as may be necessary for the legitimate business of the corporation.

Fifth—To render the interest of the stockholders transferable.

Sixth—To appoint such subordinate officers and agents as the business of the corporation may require, and to allow them a suitable compensation therefor.

Seventh—To make by-laws, not inconsistent with any existing law, for the management of its affairs.

From the statement of the general rule, it will be readily seen that these powers and rights are conferred upon corporations alone. While we have assumed certain of them, such as the seal, and officers, still it is a usurpation, enjoyed only because there is no objection.

If this Association be incorporated, its powers and rights are plain to you. It would be recognized in law as an entity. The cost would be nominal. Our present constitution, as heretofore amended, is sufficient and would only need be filed in the office of the Secretary of State. This constitution, together with the laws of the state, would represent our charter. By such action we will be recognized in law. However, if such a step be sanctioned, it is recommended that the time of existence of the corporation be fixed, at 25 years, the limit as provided by law.

Respectfully submitted,
A. S. v Mansfelde, Committee.

## REPORT OF THE COMMITTEE ON JOURNAL AND PUBLICATION.

Two years ago this body adopted the report of the committee on a proposed association-owned journal, and by this act the Nebraska State Medical Journal was launched.

Apparently, as an evidence of supreme confidence in the personnel of the committee, the same three persons were elected the Committee on Journal and Publication, and have so remained to date.

The original committee guaranteed a creditable self-supporting journal, according to plans and specifications then submitted, and these plans have been carried out.

You have given the subscription of all your members at $1.25 per year, and permission to find the necessary additional money to pay the bills and conduct the journal.

At the end of the first year the committee reported a net balance on hand of $260.68, which amount the committee expected to use in bettering the Journal, but which through mischance, under existing by-laws, automatically reverted into the general fund of the association and left your journal committee stranded, to begin the second year like the first, with nothing but prospects.

Undaunted and with faith in the future, the work has gone forward during the past year as well as it could with the limited resources at hand and again there is a balance in the fund, and no unpaid bills. This has been possible, only by the strictest economy, and at the expense of planned betterments of the journal.

We are almost ashamed to admit that neither the editor nor business manager have been paid anything during 1916 and 1917, but neither has expected anything. The editor and business manager of the Iowa Medical Journal is paid $1,500 per year.

The association cannot longer expect gratuitous service from editor and business manager.

The committee feels that the journal is creditable from every standpoint, in spite of handicaps mentioned, and some not mentioned. People are apt to not fully appreciate their own. Members are prone to take it for granted that the financing and publication of a medical journal is easy and to expect unreasonable things. However, if there has been adverse criticism it has failed to reach the committee's ears.

It may be of interest to know that the Cooperative Medical Advertising Bureau (which furnishes us most of our advertising) reports taking a special pride in showing the Journal to prospective advertisers, owing to its artistic arrangement. You will also be pleased to know that the success of the Journal is known all over the United States, and that numerous inquiries have come to us asking for our plans, and how we did it, and what we pay our editor and business manager.

All business men have found the necessity in these war times, of reorganizing their forces in such a way as to give the greatest efficiency, with a minimum of overhead expense. The Nebraska State Medical Journal, the Nebraska State Medical Association, is confronted with the same problem.

This means, an increase of appropriation for income, a concentration of forces in the working offices, and an unhesitating suppoirt of, and backing of, the requests of the committee.

The committee plans, with your approval, to establish a Journal office in suitable quarters, which shall be the headquarters and home of the Association, in which shall be employed a competent and adequately paid stenographer and general office factotum, a place where all the activities of the Association may be handled with accuracy and dispatch, in fact reproduce in minature, the headquarters of the Journal of the American Medical Association.

It is absolutely essential to the success of the Journal that the Journal Fund be held sacred for the purpose for which it is intended, and it is therefore asked by the committee that a by-law be created making the Journal Fund an exception to the law that all unexpended balances must be covered back into the treasury of the Association at the end of the fiscal year. It is also essential that a special appropriation be made to the Journal Fund of the amount of $260.68, to refund that amount taken from the committee by mischance.

Further, inasmuch as printers and paper prices are constantly advancing, and advertising uncertain, the committee feels the absolute need of an appropriation to the Journal Fund, for each member of $1.50.

**Total Receipts and Disbursements Account Journal Fund, June to December, Inclusive, 1917.**

(As furnished by Dr. J. M. Aikin, Business Manager)

RECEIPTS

| | Rec. from Treasurer acct. Memberships | Rec. acct. Advertising | Total | |
|---|---|---|---|---|
| Balance on hand June 1st, 1917 | | | | $278.25 |
| June receipts | $113.33 | $241.60 | $354.93 | |
| July receipts | 115.40 | 256.05 | 371.45 | |
| Aug. receipts | 116.25 | 240.23 | 356.48 | |
| Sept. receipts | 116.97 | 212.21 | 329.18 | |
| Oct. receipts | 117.49 | 242.36 | 359.85 | |
| Nov. receipts | 117.49 | 208.63 | 326.12 | |
| Dec. receipts | 117.91 | 283.25 | 401.16 | |
| | $814.84 | $1683.33 | | 2499.17 |
| Surplus from Bureau, Dec. 1917 | | | | 27.66 |
| Subscriptions | | | | 6.00 |
| | | | | $2811.08 |

DISBURSEMENTS.

| | | |
|---|---|---|
| Publication Expense | $1629.27 | |
| Salaries | 440.00 | |
| Miscellaneous | 35.00 | 2104.27 |
| Balance on hand Dec. 31st, 1917 | | $706.81 |

Respectfully submitted,

F. A. Long, Chairman,
B. F. Bailey,
W. O. Bridges,
Journal Committee.

Accounts as reported above examined and found correct.

A. B. Somers, Chairman,
D. T. Quigley,
L. B. Bushman,
May 1, 1918. Auditing Committee.

## REPORT OF AUDITING COMMITTEE.

Omaha, April 29th, 1918.

Your committee, reporting on receipts and expenditures in the Secretary's office, find as follows:

**Receipts From Annual Meeting 1917 to Dec. 31, 1917.**

Apportionment for Secretary's office for expenses to Dec. 31, 1917 ....$400.00

| | |
|---|---|
| Received from advertising in official programs (1917) | 10.00 |
| Total receipts | $410.00 |

Disbursements From Annual Meeting 1917 to Dec. 31st, 1917.

| | | |
|---|---|---|
| Office rent, June to December, inclusive (1917) | $70.00 | |
| Stationery, Stamps and Sundry Office Supplies | 134.45 | 204.45 |
| Balance in bank Jan. 1, 1918 | | $205.55 |

Reporting on Monies Received as Dues by Your State Secretary and by Him Transmitted to Your State Treasurer, We Find as Follows:

From Annual Meeting, 1917, to December 31st, 1917.

| Dues | | Defense Fund | | |
|---|---|---|---|---|
| Current | Arrears | Current | Arrears | Total |
| $298.00 | $2.00 | $149.00 | $1.00 | $450.00 |

Total for Year January 1st, to December 31st, 1917.

| Dues | | Defense Fund | | |
|---|---|---|---|---|
| Current | Arrears | Current | Arrears | Total |
| $2276.00 | $8.00 | $1138.00 | $4.00 | $3426.00 |

Comparison of the books and receipts of your Secretary with those of your Treasurer show a correct accounting al all monies handled by both officials as indicated in your Treasurer's report.

Respectfully submitted,
A. B. Somers, Chairman
D. T. Quigley
L. B. Bushman.

### TREASURER'S REPORT.

| | |
|---|---|
| On the 31st of December, 1917, the Association had in its General Fund a balance of | $ 457.88 |
| On May 6th, 979 members had paid their dues at $3.00, amounting to | 2,937.00 |
| | $3,394.88 |
| Paid out in monthly installments for Journal Dec., 1917, and Jan., Feb. and Mar., 1918 | 488.25 |
| Leaving a balance May 6th, 1918 | $2,906.63 |
| On the 31st day of December, 1917, the Defence Fund carried a balance of | $1,614.69 |
| On May 6th, 979 members had paid their dues of $1 each, amounting to | 979.00 |
| | $2,593.69 |
| Paid out to Association's Attorney to date for services | 250.00 |
| Leaving clear balance of | $2,343.69 |

Provision will have to be made for two-third's of a year's salary for the officers in both divisions and also for expenses for that time, to the end of the year 1918.

The salaries and expenses for 1919 will also have to be provided for at this session.

### GENERAL FUND.

| | | |
|---|---|---|
| January 1st, 1917, balance on hand | | $ 120.45 |
| January 1st to May 5th, 960 members dues | | 1920.00 |
| January 1 to May 5, 3 members in arrears | | 6.00 |
| May 5th to December 31st, 170 members dues | | 350.00 |
| May 5 to December 31, 1 member in arrears | | 2.00 |
| Returned by officers and committees as follows: | | |
| By Treasurer's expense money ret. | $15.94 | |
| By Committee on Legislation | .90 | |
| By Librarian Wherry | 46.75 | |
| By Journal Fund transferred | 260.68 | 324.27 |
| All monies received January 1 to December 31, 1917 | | $2,722.72 |
| Paid out from January 1st to May 5th: | | |
| Journal Fund | $500.00 | |
| Officers' salaries to May 1st, 1917: | | |
| J. M. Aikin, Secretary | 300.00 | |
| J. M. Aikin, to expense | 400.00 | |
| A. S. v Mansfelde, Treasurer | 50.00 | |
| A. S. v Mansfelde, expense | 25.00 | |
| Wm. P. Wherry, Librarian | 25.00 | |
| Mrs. May Finley, stenographer | 150.00 | |
| To Journal for members copy, 7 months | 814.84 | $2,264.84 |
| General Fund balance on hand Dec. 31, 1917 | | $457.88 |

### ORDERS TO OFFICERS OF THE MEDICAL RESERVE CORPS OF NEBRASKA.

Nebraska, May 4, 1918.

To Army Medical School for instructions, Lieut. Oscar F. Lang, Falls City.

To Ann Arbor, Mich., Psychopathic Hospital, for intensive training, Lieuts. Ward W. Hedlund, Ingleside; Andrew J. Smith, Salem.

To Camp Dodge, Des Moines, Ia., base hospital, from Fort Riley, Capt. Henry R. Miner, Falls City.

To Chicago, Ill., Presbyterian Hospital, for instruction, and on completion to his proper station, from Camp Dodge, Lieut. Thomas E. Atkinson, Mullen.

To Fort Des Moines, Ia., base hospital, Lieut. Edwin G. Davis, Lincoln; from Camp Pike, Lieut. Harry E. Flansburg, Lincoln; from Camp Shelby, Capt. John B. Potts, Omaha; from Fort Oglethorpe, Lieut. George W. Covey, Lincoln; from Fort Riley, Major Charles A. Hull, Capts. John R. Nilsson, Omha; James C. Waddell, Pawnee City; Lieuts. Robert C. Panter, Dorchester; Miles J. Breuer, James E. M. Thomson, Lincoln; John S. Simms, North Platte.

To Fort Riley for instruction, Capts. Findley J. McRae, Albion; Frank L. Frink, Newman Grove.

To New York City, Neurological Institute, for instruction, and on completion to Hoboken, N. J., base hospital, from Fort Oglethorpe, Lieut. Abraham Greenberg, Omaha.

Nebraska, May 11, 1918.

To Camp Grant, Rockford, Ill., base hospital, from New York City, Lieut. James F. Kelly, Dawson.

To Camp Kelly, San Antonio, Tex., for duty, from Camp MacArthur, Lieut. Frank H. Morrow, Columbus.

To Chicago, Ill., Presbyterian Hospital, for instruction, and on completion to Camp MacArthur, Waco, Tex., base hospital, from Fort Leavenworth, Lieut. Clark D. Spivey, Lincoln.

To Fort Riley for instruction, Capt. Harry W. Francis, Bancroft; Lieuts. Neill J. Everitt, Kearney; Joseph P. Swoboda, Omaha; Louis D. McGuire, Wisner.

To Rockefeller Institute for instruction in laboratory work and on completion to Army Medical School for duty, Lieut. Guy S. Philbrick, Omaha.

Honorably discharged, Capt. Harry M. Bonniwell, Lincoln. On account of physical disability, existing prior to entrance into the service, Lieut. Raymond A. Young, Auburn.

### Nebraska, May 18, 1918.

To Camp Dix, Wrightstown, N. J., for duty, from San Antonio, Capt. William J. Pinkerton, Bostwick.

To Camp Dodge, Des Moines, Ia., base hospital, from Army Medical School, Lieut. Sanford R. Gifford, Omaha.

To Camp Joseph E. Johnston, Jacksonville, Fla., base hospital, Lieut. John W. Duncan, Omaha.

To Camp Pike, Little Rock, Ark., base hospital, from Army Medical School, Lieut. Clarence M. Hyland, Omaha.

To Fairfield, Ohio, Signal Corps Aviation School, for duty, from Fort Omaha, Lieut. Frank W. Scott, Lodge Pole.

To Fort Logan, Colo., for temporary duty and on completion to his proper station, from Fort Omaha, Lieut. William E. Mogan, Petersburg.

To Fort Riley, base hospital, Capt. Norman T. Hale, Eustis. For instruction, Lieut. George H. De May, Wilsonville.

To Houston, Tex., Ellington Field, Signal Corps Aviation School, from Mineola, Lieut. John R. Kleyla, Omaha.

To Jefferson Barracks, Mo., for temporary duty, from Fort Riley, Lieut. J. Irvin Limburg, Walthill.

To Lonoke, Ark., Signal Corps Aviation School, from Mineola, Lieut. Claude T. Uren, Omaha.

To New York City, Cornell Medical College, for instruction in military roentgenology, from Fort Riley, Capt. John R. Beatty, Butte; Lieut. Earl W. Fetter, North Platte. Neurological Institute for instruction, Major Edwin C. Henry, Omaha.

### Nebraska May 25, 1918.

To Burlington, Vt., University of Vermont, to make physical examinations and give medical attention to the drafted men to be enrolled at this institution, from Camp Dix, Capt. William J. Pinkerton, Bostwick.

To Camp Pike, Little Rock, Ark., for duty, from Camp Dodge, Lieuts. Francis M. Swartwood, Bethany; Hal D. Wilmeth, Lincoln; Arthur M. Sonneland, Norfolk.

To Camp Sevier, Greenville, S. C., as member of a board of medical officers for the special examination for tuberculosis, from Fort Oglethorpe, Capt. William N. Anderson, Omaha; Lieut. Torrence C. Moyer, Lincoln.

To Fort Riley, base hospital, Capt. William Evans, Columbus. For instruction, Capt. James S. Taylor, Fairbury. For temporary duty, Lieut. Harvey B. Stapleton, Omaha.

To Fort Sam Houston, Tex., for duty, Lieuts. John T. Rees, Fort McDermitt; Edward A. Van Vleet, Omaha; William S. Dinsmore, Pierce.

To report by wire to the commanding general, Central Dept. for assignment to duty, Capt. Frank C. Genung, Wausa.

To Rochester, Minn., Mayo Clinic, for instruction, and on completion to Camp Pike, Little Rock, Ark., base hospital, from Fort Riley, Lieut. John H. Regan, Grand Island.

### Nebraska, June 1, 1918.

To Burlington, Vt., University of Vermont, to make physical examinations and give medical attention to the drafted men to be enrolled at this institution, from Camp Dix, Capt. William J. Pinkerton, Bostwick.

To Camp Pike, Little Rock, Ark., for duty, from Camp Dodge, Lieuts. Francis M. Swartwood, Bethany; Hal D. Wilmeth, Lincoln; Arthur M. Sonneland, Norfolk.

To Camp Sevier, Greenville, S. C., as member of a board of medical officers for the special examination for tuberculosis, from Fort Oglethorpe, Capt. William N. Anderson, Omaha; Lieut. Torrence C. Moyer, Lincoln.

To Fort Riley, base hospital, Capt. William Evans, Columbus. For instruction, Capt. James S. Taylor, Fairbury. For temporary duty, Lieut. Harvey B. Stapleton, Omaha.

To Fort Sam Houston, Tex., for duty, Lieuts. John T. Rees, Fort McDermitt; Edward A. Van Vleet, Omaha; William S. Dinsmore, Pierce.

To report by wire to the commanding general, Central Dept. for assignment to duty, Capt. Frank C. Genung, Wausa.

---

## DEFENSE FUND.

| | | |
|---|---|---|
| January 1st, 1917, balance on hand | | $1,673.07 |
| January 1st to May 5th, 960 members dues | | 960.00 |
| January 1 to May 5, 3 members in arrears | | 3.00 |
| May 5 to Dec. 31, 175 members dues | | 175.00 |
| May 5 to December 31, 1 member in arrears | | 1.01 |
| May 14 to September 22, 1917, cash from Southern Surety Company | | 19.00 |
| Returned by Chairman of Expense Money | | 81.50 |
| | | $2,912.58 |
| Paid out from January 1 to May 5 upon Vouchers 21, 22, 23, 24 and properly endorsed by President and Secretary | $697.89 | |
| May 14th to May 5th, 1918, to salary of chairman of committee | 300.00 | |
| May 14, to expense of office, chairman | 200.00 | |

| | | |
|---|---|---|
| September 13, to attorney's fee, J. A. Donahue | 100.00 | $1,297.89 |
| | | $1,614.69 |
| Defense Fund, balance on hand Dec. 31, 1917 | | $1,614.69 |
| General Fund, balance on hand Dec. 31, 1917 | | 457.88 |
| Total amt. due Nebraska State Med. Assn. | | $2,072.57 |

Respectfully submitted,
A. S. v Mansfelde, Treasurer.

## HONOR ROLL.

### Adams County

HASTINGS—Eugene Clair Foote; Lester Kenneth Strate. INGLESIDE—Ward Willard Hedlund; Harry Jay Pittock. PAULINE—Charles Nicholas Meriwether.

HASTINGS—Samuel James Stewart.

### Antelope County.

NELIGH—Stanley Curtis Clements; Ben Samuel Harrison. OAKDALE—George William Earle.

### Blaine County

CRETE—Francis Joseph Stejskal.

### Boone County

ALBION—Herbert Peter Walker; Finley Joseph McRae. CEDAR RAPIDS—Frank Dooley Burgess. PETERSBURG—William Edward Mogan. ST. EDWARDS—Thomas Jefferson Jones.

### Boyd County

BUTTE—John Ray Beatty. LYNCH—Guy Bentley Ira.

### Brown County

AINSWORTH—Oscar Edwin Coleman; Tyre Kinser Jones. JOHNSTOWN—Charles Edward Remy. LONG PINE—Arthur Jacob Griot; Sam Hardeman; James C. Tucker

### Buffalo County

ELM CREEK—Charles Albert Yoder. KEARNEY—Delbert L. Hibberd; Wallace Edson Rose; Judd A. Strong.

### Burt County

CRAIG—Alfred Edward Westervelt. LYONS—Frank Dell Ryder. OAKLAND—Samuel August Swenson. TEKAMAH—Henry Albert Johnson; Merritt Wood.

### Butler County

DAVID CITY—Charles Edward Palmer.

### Cass County

GREENWOOD—Harry Webber McFadden. WEEPING WATER—James Walter Thomas.

### Cedar County

COLERIDGE—Fredk. E. Braucht. HARTINGTON—Lucien Stark; Edw. Martin Thies. RANDOLPH—Bert Fuller Gleason.

### Chase County

CHAMPION—Charles Edwin Legg.

### Cherry County

CODY—William Roy Cornelius.

### Cheyenne County

LODGE POLE—Frank Waldo Scott. SIDNEY—Riley Edward Roche.

### Clay County

EDGAR—Robert Turney Jones. FAIRFIELD—Geo. Henry Bentz.

### Colfax County

SCHUYLER—Ralph S. Hart; Jesse Carl Painter; Oscar Paul Schnetzky.

### Cuming County

BANCROFT—Harry Whiting Francis. WEST POINT—Harry Lee Wells.

### Custer County

ANSELMO—Claude Leroy Wills. ANSLEY—Ralph Philip Higgins; Charles Lawson Housel. BROKEN BOW—Willis Edward Talbot. CALLAWAY—Roy Douglas Bryson. OCONTO—John Christopher Wade.

### Dakota County

HOMER—Daniel Brooks Stidworthy.

### Dawson County

COZAD—Lloyd Henry Fochtman. EDDYVILLE—James Bernard Kile. FARNAM—Alfred E. Reeves. OVERTON—Charles B. Edwards.

### Dixon County

PONCA—John M. Davey; Glyndon Angus Young.

### Dodge County

FREMONT—George James Haslam. HOOPER—Clinton Daniel Heine. NORTH BEND—William Elden Doane; Paul Regan Howard.

### Madison County

MADISON—Arthur Emile Gadbois; Edward Olinger Wilson. NEWMAN GROVE—Frank Lee Frink; Carl Augustus Meyer. NORFOLK—Augustus Charles Barry; Harry R. Carson; Warren Martin Phillips; Peter Harold Salter; Arthur Marinus Sonneland.

### Merrick County

CLARKS—Ralph Conklin Christie; Lowell Little.

### Morrill County

BAYARD—Grover Cleveland Rice.

### Nance County

BELGRADE—Onley Alphonso Brittell. FULLERTON—Roy Ellsworth Hall. GENOA—Homer Davis; Henry Eugene King; Creighton David Williams.

### Nemaha County

AUBURN—Edgar Cline; Ira Hugh Dillon. PERU—William D. Jack; Bartlett Lockwood Shellhorn.

### Nuckolls County

BOSTWICK—William James Pinkerton.

### Otoe County

NEBRASKA CITY—William Edmonds; Martin Luther Koser. PALMYRA—Chas. Percy Charlton.

### Pawnee County

PAWNEE CITY—Earl Brisbin Brooks; James Clyde Waddell. STEINAUER—Walter Lawrence Johnson. TABLE ROCK—Miles John Breuer; Leo Dow Harman.

### Pierce County

OSMOND—Ellis Herbert Whitehead. PIERCE—William Sidney Dinsmore.

### Platte County

COLUMBUS—Charles H. Campbell; Carroll Dandola Evans, Jr.; James North Evans; William Samuel Evans; Theodore Henry Koefoot; Frank Henry Marrow; William Richard Carl Neumarker.

### Red Willow County

DANBURY—McDonald Ryan; Griffith Alonzo De May. McCOOK—Roland Ray Reed.

### Richardson County

BARADA—Jesse Franklin Strong. DAWSON—James Francis Kelly. FALLS CITY—Sam David Cowan; Oscar Fredk. Lang; Henry Rufus Miner. SALEM—Andrew Jackson Smith.

### Rock County

NEWPORT—Clinton Quincy Dodd.

### Saline County

DORCHESTER—Robert Carpenter Panter. WILBER—Louis John Storkan.

### Sarpy County

GRETNA—Charles Edward Pinckney. PAPILLION—Wesley C. Becker; Oswald H. Margaret. SPRINGFIELD—John Arthur Peters.

### Saunders County

WAHOO—Charles Willard Way.

### Scottsbluff County

SCOTTSBLUFF—Joseph Benson Schrock.

### Seward County

MILFORD—James G. Muir. SEWARD—Edward M. Bernecker.

### Sheridan County

RUSHVILLE—William Henry Crawford.

### Sherman County

LOUP CITY—Otto Earle Longacre.

### Sioux County

HARRISON—Frank M. Barns.

### Thayer County

BELVIDERE—Walter Edwin Kelly; Thomas Lahners, Jr. HEBRON—Joseph Harold Boyes.

### Thurston County

PENDER—John Buis. ROSALIE—J. Jay McCarl. WALTHILL—Irwin Limburg.

### Washington County

ARLINGTON—George Frederick Hawes. BLAIR—Louis Lancelot Burstein.

### Wayne County

CARROLL—William Henry Phillips. WAYNE—Earl B. Erskine. WINSIDE—Victor Lamont Siman.

### Webster County

BLUE HILL—Philip Henry Bartholomew; Claude Ross Laird. COWLES—William E. M. Devers.

### Woodbury County

SHICKLEY—Laird W. Elwood.

---

## Officers for 1919 of Nebraska State Medical Association.

President—Col. J. M. Banister, Omaha.

Vice Presidents—Dr. A. I. MacKinnon, Lincoln; Dr. F. W. Buckley, Beatrice.

Secretary-Treasurer—Dr. J. M. Aikin, Omaha.

Corresponding Secretary and Librarian—Dr. Wm. P. Wherry, Omaha.

Delegate to American Medical Association—Dr. J. M. Aikin, Omaha.

Alternate Delegate to A. M. A.—Dr. J. J. Hompes, Lincoln.

Delegate to Council of Medical Education—Dr. A. D. Dunn, Omaha.

Councilors—
1st District—Dr. A. P. Overgaard, Omaha.
2nd District—Dr. H. J. Lehnhoff, Lincoln.
3rd District—Dr. R. W. Fouts, Dawson.
4th District—Dr. A. E. Cook, Randolph.
5th District—Dr. R. E. Byers, Erickson.
6th District—Dr. E. O. Weber, Wahoo.
7th District—Dr. W. L. Curtis, Fairbury.
8th District—Dr. W. J. Douglas, Atkinson.
9th District—Dr. Geo. I. Sellon, Broken Bow.
10th District—Dr. S. F. Sanders, Holdrege.
11th District—Dr. H. E. Mantor, Sidney.
12th District—Dr. A. J. Stewart, Mitchell.

Chairman Surgical Section—Dr. J. A. Welch, Lincoln.

Secretary Surgical Section—H. E. Burdick, David City.

Chairman Medical Section—B. W. Christie, Omaha.

Chairman Journal Committee—Dr. F. A. Long, Madison.

Chairman Medico-Legal Defense Committee—Dr. A. S. von Mansfelde, Ashland.

## All-Summer Classes for Medical Students.

The present sophomore and junior classes of the University of Nebraska College of Medicine will operate continuously during the summer, the first semester beginning Monday, June 3, it was announced today. This continuous operation is in response to a general demand that medical students approaching completion of their courses shall be rendered available for army service at the earliest possible moment.

Twenty-two graduates of the college of medicine of the University of Nebraska, Omaha, will go to Lincoln Monday to receive the degree of doctor of medicine at the annual commencement of the university. They are:

Bantin, E. W.
Bede, Clark E.
Brandt, Emelia.
Burman, Guy E.
Cassidy, W. A.
Davis, Kenneth.
Dow, Andrew G.
Eusden, R. B.
Figi, F. A.
Folken, Garrett.
Frandsen, Charles.
Johnson, R. E.
Larson, A. A.
Meuer, R. T.
Myers, R. T.
Owen, D. R.
Safarik, L. R.
Schemback, I. S.
Wear, John W., Jr.
Weyer, S. M.
Westover, R. P.
Weigand, G. L.

Most of the graduates will go directly into the medical reserve corps of the army. A few will go into the navy and a few serve internships in important hospitals.

The surgeon general recognizes the tremendous need for well trained medical men, and has given his sanction to continuous operation of these classes in well equipped medical schools. The needs of the army and navy as well as of the civil population must be met. At the present time the entire country is feeling the loss of several thousand medical men who have entered the army service. From Nebraska alone approximately 400 physicians have joined the colors.

---

## Graduates of Benjamin F. Bailey Sanatorium Lincoln, Neb., May 31, 1918.

Edna O. Dickinson, Lincoln, Neb.; Bertha A. Ricken, Cedar Bluffs, Neb.; Kathryn B. Doyle, Greeley, Neb.; Nellie E. Bengtson, Shickley, Neb.; Aura D. Martin, Omaha, Neb.; Mary A. Metcalf, Hyannis, Neb.

## Graduates Clarkson Hospital

### Monday Evening, May 13, 1918.

Leah Blanche Squires, Ada Florence Holmes, Esther E. Lundberg, Amy Bird, Blanche Udey, Mette K. Blair, Ellen E. Sutton, Frana M. Schild, Louise C. Mapes, Marguerite Moore, Allison Laurel Martin.

## Nebraska Methodist Episcopal Hospital Graduating Class, May 28, 1918.

Lulu Luebbert, Margaret David, Inez M. Mocroft, Blanche Lela Sterner, Minnie E. Howe, Emily F. Rorer, Edna Beryl Cornell, Anna M. Steppat, Elizabeth Mudge, Jennie May Carlson, Alta Burger, Eva Clara Solberg, Dorothy Ashley Stowitts, Nannie G. Grant, Christine Hesler, Esther L. Nelson, Lola Moerke

## Graduates Swedish Mission Hospital, May 23, 1918.

Mary Veda Jackson, Sigrid Holmstrand, Anna Haglund, Ruth A. Linder, Anna M. Hagquist, Grace T. Tardine, Esther Wendell, Gertrude W. Catz.

---

## COUNTY SOCIETY NOTES.

The physicians of Phelps county, at the call of Dr. S. F. Sanders, councilor of the 10th Councilor District, met at the court house to consider plans to meet the needs of the Army and Navy Medical Reserve Corps.

Drs. present: S. F. Sanders, G. N. Whittier, W. A. Schreck, E. E. Rider, I. E. Whitehead, P. A. Sundbury and J. L. Magill.

Dr. Sundbury, as county medical secretary, acted as secretary of the meeting.

The following resolution was made and seconded and accepted by all present, viz:

Be It Resolved, by the meeting of the physicians of Phelps county that it is the sense of the meeting that this county will furnish its full quota of physicians as required by the National Council of Defense.

Further, it was moved and seconded that each physician who remained at home sign an agreement to pay to the family of each one who goes $10.00 per month, and that any physician who comes into the county be required to sign and accept the above agreement. Carried.

No further business it was moved and seconded that meeting adjourn. Carried.

P. A. Sundbury, Secretary.

## Nebraska Supplementary List March 1st to 31st, Incl.

Recommended for Commissions.

| | | |
|---|---|---|
| Samuel James Stewart | Hastings | Captain |
| Ward William Hedlund | Ingleside | 1st Lieut. |
| John William Duncan, 1122 W. O. W. Bldg., | Omaha | 1st Lieut. |

## April 1st to 30th, Incl.

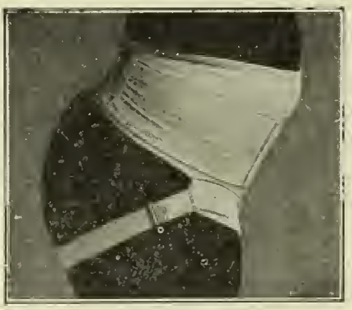
| | | |
|---|---|---|
| Cecil Clare Copeland | Beaver City | Captain |
| Edgar Allen Pickens | Benkelman | 1st Lieut. |
| Perry Delphos Kelly | Nemaha | 1st Lieut. |
| Edwin Clyde Henry, Lord Lister Hospital | Omaha | Major |
| George Watson Twomey, 1314 Douglas St. | Omaha | Captain |

## May 1st to 31st, Incl.

| | | |
|---|---|---|
| Samuel Rice Hopkins, Clarke Hotel | Hastings | Major |
| Isaac Louis Bogen, 1105 O St. | Lincoln | Captain |
| William Shepherd | Rulo | 1st Lieut. |
| Arthur Andrew Smith, Mary Lanning Memo. Hosp., | Hastings | 1st Lieut. |
| Leroy Crummer, 801 City Nat'l. Bank Bldg. | Omaha | Captain |

The Storm Binder and Abdominal Supporter

(Patented)



Men, Women, Children and Babies

For Hernia, Relaxed Sacro-Iliac Articulations. Floating Kidney, High and Low Operations, Ptosis, Pregnancy, Obesity, Pertussis, Etc.

Send for illustrated descriptive folder with physician's' testimonials; measuring diagram and samples of materials.

Mail orders filled at Philadelphia only—within 24 hours.

KATHERINE L. STORM, M. D.
1541 Diamond St., Philadelphia.

SAFETY SERVICE SAVING

19th and FARNAM

NEW FIREPROOF

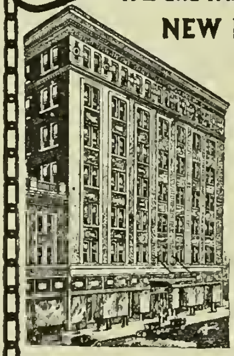
200 ROOMS

With Private Bath $1.50

With Private Toilet $1.00

On Direct Car Line From Depots

Hotel Sanford
OMAHA



# THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, LINCOLN, MAY, 1919

Vol. III. Norfolk, Nebraska, July, 1918. No. 7

CONTENTS.

Page

The Correction of Nasal Deformities by the Transplantation of Bone, J. M. Banister, A. B., M. D., Omaha ..... 201

Public Health Service for Rural District, F. W. Buckley, M. D., Beatrice ..... 203

Treatment of Diabetes, (Especially with Reference to the Dietetic Control of the Diabetic), Frederick A. McGrew, M. D., Comstock ..... 206

Mechanical Ileus Due to Twisted Pedicle of Cystic Ovary, P. H. Salter, M. D., Norfolk 210

Actual Benefit to Surgery Derived from the Present War, R. R. Hollister, M. D. ..... 211

Medical Aid and Selective Service Draft ..... 214

Procaine and Novocaine Identical ..... 216

Abstracts—

Wood Alcohol Poisoning, A. O. Gettler and A. V. St. George ..... 216

Poliomyelitis in Sweden, by Wernstedt ..... 217

Editorial ..... 218

State Notes ..... 220

Necrology ..... 221

Orders to Officers of Medical Reserve Corps for June ..... 221

General Notes ..... 222

County Society Notes ..... 223

Book Reviews ..... 223

Honor Roll ..... 224

List of Officers Commissioned from Nebraska, in the Medical Officers Reserve Corps 225

Grades of Medical Officers in the Army, Major Louis L. Seaman, M. D ..... 231

## The Correction of Nasal Deformities by the Transplantation of Bone.

J. M. Banister, A. B., M. D., Omaha.

Colonel U. S. Army, Retired.

The discussion of this subject will be limited to the correction of the so-called saddle, or depressed bridge, and of collapse, or depression of the nasal tip.

The deformity occasioned by saddle-bridge varies extremely, in fact from a virtual absence of any bridge at all, to a comparatively moderate depression. Many victims of this deformity are extremely sensitive in consequence and are clamorous for relief. The knowledge that this deformity is sufficiently marked to attract attention causes them to avoid company, and is conducive to great mental suffering. The usefulness of these individuals is seriously curtailed in consequence, and if the specialist can remove the source of their disquietude, which in many cases almost amounts to a form of monomania, he will be conferring a great boon.

A great many types of operation have been devised for the correction of this deformity. I shall only refer, however, to the correction by means of bone transplantation, as represented by the methods of Carter and Beck.

A. Carter's operation. The object of this operation is to introduce a longitudinal section of bone subcutaneously through a small incision, curved downward, between the inner extremities of the eyebrows, and to push this graft down to near the tip of the nose, thus bridging over the depression. The bone graft may be obtained from the tibia, or rib, the latter being far more preferable as the source for reasons to be stated later. The operation is performed as follows: A curved incision is made over the bridge of the nose, the convexity of the curve being downward, and the incision commencing near the inner extremity of one eyebrow and terminating at the similar end of the other. This incision is carried down to the periosteum. A horizontal incision is made through the periosteum, which is dissected upward in the form of a cuff toward the forehead for about three-eighths of an inch, and temporarily turned up. Then a Mayo scissors is inserted through this opening, and the skin is dissected up subcutaneously down to the tip of the nose and over the cheek on either side, care being taken to avoid button-holing the skin. These steps having been taken the wound over the nasal bridge is covered temporarily with a small gauze compress, and the bone to be transplanted secured as follows. An incision of about three or three and a half inches in length is made over the ninth rib of the right side, and carried down to the rib itself. The rib is then shelled out of its periosteum and two inches removed by the costotome. While the operator is preparing the graft an assistant under the strictest aseptic conditions, will be closing the wound. The section of rib is then divided longitudinally into an anterior and posterior half. The soft tissue on the interior is scraped out and the anterior half of the rib section fashioned to the proper size. This is then introduced through the little wound between the eyebrows and pushed down underneath the undermined skin to the tip of the nose, the upper end being covered by the cuff of the periosteum. If this should not prove sufficient to relieve the deformity, the other half of the rib section may be utilized and passed down toward the nasal tip over the first graft. The wound is then closed with horse hair sutures and dressed with gauze and collodion reinforced with strips of adhesive. The operation is performed under general anesthesia. This operation is extra-nasal throughout.

In cases of collapse of the tip and depression of the alae nasi, which at times give a peculiar deformity with a leonine appearance, this same operation is indicated. These cases in most instances owe the deformity to a loss of the cartilaginous septum from abscess of the septum or extensive ulceration. In these cases the bone graft instead of bridging over a nasal depression, as in the case of the saddle-back deformity, lifts up and holds up the depressed tip from an anchorage on the bones of the nose. I have never seen anything in literature concerning this means of raising up the collapsed nasal tip but in planning to correct one case, in which the deformity was extreme, it occurred to me that the same operation of bone transplantation might be utilized for lifting up the nasal tip. I carried out this plan with a very happy result. I have since performed the same operation on another case of depressed nasal tip, and as this patient has kindly consented to appear before the society today those present can judge of the result at first hand.

B. In Beck's operation for saddle-back nose the bone graft is secured in the way described, and after being fashioned, and bent in a V shape, is introduced over the deformity and under the skin through an intra-nasal incision.

Carter, too, of late has in certain cases been making use of an intra-nasal incision. In my limited experience I have not employed the intra-nasal method. For obvious reasons it does not seem that asepsis under this method can be as well secured as under the extra nasal route.

The rib graft is preferable to that obtained from the tibia for the following reasons, viz.: The curve of the rib adapts itself to the desired shape of the nose, and besides the tissue of the rib is more porous than the compact bone of the tibia, and hence more suitable for the entrance of osteo-blasts and new blood vessels in the process of absorption and conversion into new bone to be presently described. It will be noted from the description given that the rib is shelled out of the periosteum in the method of operating which I have followed. It is much easier and more expeditious to remove the section of the rib in this way, and there is far less danger of opening the costal layer of the pleura. Furthermore the life of the graft is as well guarded in the one case as in the other, as the presence, or absence, of the periosteum makes no special difference in this regard.

Now let us consider what happens to a piece of bone, which has been transplanted from its normal situation to another in the same individual. In this connection I beg leave to refer to paper by W. E. Gallie and

D. E. Robertson of Toronto, published in the Journal of the American Medical Association for April 20th, and to make use of the results of their investigations in this direction.

The first result, according to these observers, in such bone "is the coagulation of all cells and vessels to which the surrounding lymph is unable to percolate." All of the cells in the lacunae and most of those in the Haversian canals die therefore. There are, however, many osteo-blasts on the surface of the transplanted bone, and in the mouths of the Haversian canals, which are in a more favorable position to secure nutriment from the surrounding lymph, which bathes the surfaces of the graft, and these cells live and proliferate. In ten days the proliferation of these osteoblasts is well established on the periosteal and endosteal surfaces and in a few days more new bone formation can be seen on these surfaces. Furthermore these osteoblasts proceed to attack the dead bone of the graft and produce excavations which are filled by new bone formed by these cells.

At the same time that these surface changes are occurring, new blood vessels grow into the mouths of the Haversian canals. Osteoblasts accompany these new blood vessels from the surface, and absorption of dead bone and the formation of new bone continue pari passu in the body of the bone until possibly after some months the transplanted graft has been entirely replaced by new bone. In fact, in accordance with the experiments and observations of Gallie and Robertson, transplanted grafts are entirely replaced by new bone. In the case, therefore, of the transplantation of a bone graft to relieve nasal deformities we can feel assured that the effect will remain permanent. Again, these results occur whether the periosteum is present or not. When the periosteum has been stripped off a piece of bone the surface of bone underneath is covered with a layer of osteoblasts, which proceed to the development of new bone just as has been described. Indeed Gallie and Robertson refer to the periosteum as being in these cases merely a fibrous covering for the bone and as being in no wise necessary to the formation of bone. Consequently in securing our grafts the preservation of the periosteum need not be considered.

## Public Health Service for Rural District.*

F. W. Buckley, M. D., Beatrice.

Health as a factor in industrial efficiency is rapidly assuming a position in current thought which its importance merits; a condition brought about through force of circumstances.

The year 1918 is marked by a state of feverish activity in all lines of production, which contributes to the carrying on of the war. The magnitude of this war is such as to tax to the limit our capacity for materials, and to drive the producers to the utmost of physical endurance.

All resources are being conserved, every acre of soil is being coaxed and encouraged to yield its fullest measure.

The necessity of this great effort is evident to all as we are pitted against an enemy who employes every known fact of science to accomplish our destruction.

Nebraska's chief industry is agriculture and upon her must fall the responsibility of aiding to maintain food supplies to the allied armies and people.

Much commendable work is being done by food administrators in reducing waste, and by farm demonstrators in the matter of crop improvement, but the -human element, the most essential and vital element in the task before us has received secondary consideration.

Those conversant with the history of public health administration in Nebraska, will comprehend something of our general state of unpreparedness to meet the unusual demands of time.

It is true that a great advance was made during the last biennium by the reorganization of the department of health, but a penny wise legislature, which valued our physical well being at something less than two cents a head, rendered the department impotent to realize its full measure of usefulness, because of insufficient funds; the public health engineer and four district health officers are still unprovided for. But assuming these offices filled and working, the task still remaining is big.

Most of the rural committees and towns and at least some of the second class cities are still operating under the old regime of local health administration.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

Each community center designates a physician as health officer. He assumes responsibility for the enforcement of laws pertaining to disease control and sanitation in his particular area. His services are given gratuitously or nearly so, and his position is most unenviable as those can testify who have tried to conduct a general practice and administer sanitary ordinances for the community at the same time.

The doctor's livelihood depends to a certain extent on the number of friends he makes, and an impartial enforcement of the health statutes is not calculated to increase his popularity. The result is, conflict between duty and necessity.

The county physician usually contracts for a modest stipend to care for inmates of the jail, poor farm, and for other indigents and supervise quarantine outside of corporate limits.

The statutes defining these offices do not contemplate any really constructive public health work, and such work of this kind as is done must originate from the purely altruistic motive of the physician himself. In brief, the system which has met the public needs rather indifferently in the past is wholly inadequate for modern requirements.

The situation throughout the rural sections is this: Physicians who at no time have been too numerous to meet the demand, are being constantly withdrawn from civil to military service and the loss cannot be replaced by the output of the colleges. Even now, when there still remains a heavy draft to be made on medical men, the shortage is being felt.

From the farms, the strong young men are going to the front leaving the physically unfit to help carry on the work at home. Man power to conduct the farms at a maximum of production is already a question of real concern.

It will be seen then that there exists in this industry, a condition of increased demand and a decreased general average of health among the workers.

The problem then is, how can the available amount of medical talent be best employed to maintain man power for the farms?

Hitherto, the agriculture population has not received due attention in the matters of hygiene sanitation and disease prevention; their livestock having fared at least equally as well if not better, than they, in this particular.

As a result there is a considerable waste of human energy that could be salvaged by proper methods.

Government surveys of the relative health conditions in rural and city schools show a higer percent of physical defect among country children, than city children. This conclusion can be accepted as holding true for adults also.

A new source of danger to communities arises from the transportation of draft men about the country, a danger to be augmented soon by the return of convalescents from the trenches. The mastery of the situation calls for immediate action.

The full complement of the state department of health as provided by law should be installed without delay and the district health officers put to work in their respective territories.

Following the lead of the County Council of Defense, medical men might form the nucleus for a Council of Health Defense. Influencial members of the laity could be included in such a body. Its purpose would be to collect information on the local health condition, focus the attention of the public on the importance of health preservation by educational methods, and give moral support to the strict enforcement of sanitary and quarantine regulations.

The occurrence of epidemic disease in a community, such as poliomyelitis, cerebrospinal meningitis, smallpox, etc., must find the authorities ready to strike quick and hard else serious hampering of the machinery of production must result.

The suggestion for a Council of Health Defense is intended as a preparatory move toward the installation of a full time health officer in each county.

An example of the practical workings of this plan is to be found in Riley county, Kansas, of which Manhattan is the county seat.

The plan was instituted there about five years ago and continued in force until the establishment of the Camp Funston Sanitary District last fall under federal supervision.

Dr. J. C. Montgomery of Manhattan is the man chiefly responsible for building up the work in Riley county. From small beginnings it grew until the doctor and two nurses were kept continually employed. Quarters were furnished in the court house and records on file there, up until a year ago gave evidence of the following activities:

Routine school inspection both rural and city and classification of the premises according to a certain standard.

A health history of each school child, conveniently card indexed. Weekly reports of health conditions in each school district furnished by a pupil assigned to this duty.

Routine inspection of dairies, eating places and food markets.

Direct supervision of all quarantine complication of morbidity statistics.

The good results of this work were evidenced in a reduction of the amount of contagious disease over previous years, a higher percentage of school attendance and a mortality rate of between eight and nine per thousand.

The hearty co-operation given by both physicians and public indicates the success of the plan. Financial support was derived from municipal and county governments and private contribution.

To consider this system in the average Nebraska county would require a tax of something like twenty-five cents per capita, an amount that compares quite favorably with the expenditure for health departments in American cities.

### Summary.

1. Health is a big factor in production.
2. Nebraska's largest and most important industry is agriculture.
3. As a war measure, the best protection must be given workers in this line.
4. The actual number of physicians practicing in rural districts is being reduced.
5. To meet the situation the full personnel of the state department of health should be completed and some effective plan of county administration adopted.

### Discussion.

**A Member:** It strikes me the weakest point in the public health office in Nebraska is from the local political influences. I live in one of the richest counties in the state and we have tried for the last year or more to get the county commissioners to appoint a county health officer and give him some authority. A number of the doctors went before the commissioners and asked them to get hold of the communicable diseases and also the matter of returning vital statistics. They took the matter under advisement and finally after about a month, appointed one doctor in each town. The final results were that nothing has been done.

Now, in addition to that, one point is brought out in the paper, that not enough is paid to justify a man in bothering with the matter. I have had quite a little experience in public health work and I know that the county health officer who does his duty will eventually make a big bunch of influential enemies and a man who is dependent upon his private practice isn't going to do that. And another thing, the laws in all the states, in my opinion, are very faulty in the matter of collecting vital statistics. We have our registrars. They are supposed to make them out specifically for each town. But you take a county practice like mine, over perhaps two or three counties. We go in an adjoining county, we do not know whose precinct we are in, we cannot find any registrar. I was practicing over three months before I knew who the local registrar was in my county, and there were three other physicians practicing for a longer time who didn't either one know. That is the condition that exists in all our communities and I know it is the weakest link in the whole chain. If you had the county officers, say, the county clerk, to collect vital statistics, let every one know who it is and then impress on them the necessity of correctly reporting the births and deaths, we could greatly increase the efficiency of the service. I know there are objections to that and that the census bureau has worked this out and I knew the weak point in this organization. If we get a local health officer, town and county, and pay him enough, if he is a man of proper education and proper personality, you will get results, otherwise you won't.

**C. L. Mullins.**—The passage of what is known as the Fox bill was secured at the last session of the legislature, not all of it but simply the core of it, as it would have been difficult to have obtained a sufficient appropriation to carry out all the provisions of the Fox measure, which would have carried the organized effort down to the counties. This must come later. There are, however, means for carrying out the work of public health in the counties so that the rules and acts of the state Health Commissioner may find response in every county and precinct in this state. It is true that there are some defects in the legal machinery that need remedying and this should be done at the next session of the legislature, thus enabling the state health commissioner to carry out the work to its logical conclusion. The conservation of health is now more than ever an important matter and it should be the desire of every physician to aid the state health authorities in stamping out disease. Soon you will each receive from the office of the state health commissioner a copy of the new health rules and it is hoped and expected that every physician practicing in this state will comply readily and willingly with the requirements therein laid down. It is a crime for any physician to allow communicable diseases to spread about the community in which he resides and if he neglects to comply with the reasonable requirements of the states public health authorities his certificate should be revoked.

## Treatment of Diabetes.

### (Especially With Reference to the Dietetic Control of the Diabetic).

Frederick A. McGrew, M. D., Comstock.

It is the aim of this paper to center special attention upon a part of the treatment of diabetes not usually given much consideration, namely, the control of the diabetic, referring only incidentally to other therapeutic practices.

As to its importance, let it be here remarked that the failure to secure and retain full control of the diet of the diabetic is the important contributing factor in such deaths as occur from the disease. Diabetes itself is not necessarily a fatal disease, at least not often in the run of cases. In nearly every instance, at the time the diabetic seeks medical aid, there remains a certain toleration for carbo-hydrates. If this toleration point is not thereafter exceeded, always, in my experience, it rises gradually to what may be considered normal for that individual.

On the other hand, if excessive concentration of blood sugar is allowed to continue the tolerance diminishes and restitution becomes increasingly difficult. Also, frequent excursions beyond the point of tolerance likewise have a bad effect upon the recuperative power of the cells.

Carbo-hydrate tolerance, together with acidosis and body weight, are chief factors which concern the clinician who undertakes the management of a diabetic. Success in the treatment of diabetes is only attained by a clever and precise balancing of these three factors. Taken together, and they are never far apart in the diabetic, they constitute an isosceles triangle which is the base of a pyramid, the apex being the diet. None of the three may safely be neglected. Nothing except the kind and quantity of food consumed greatly affects carbo-hydrate tolerance or the body weight. And though acidosis may be modified by the administration of chemical agents its degree and importance largely depend upon the character of the diet. These facts evidence the necessity of a scientific control of the diet. Also, a voluntary or self control must finally be established, as, manifestly, it is not practicable to subject any mentally competent patient to involuntary restraint, and the personal pressure of the physician is bound sooner or later to be relaxed or withdrawn. Furthermore, the diabetic state being constitutional with the tendency toward permanency, the patient must subject himself to a control which is constant and prolonged. To restrain himself from breaking diet when food is at hand in plenty and he is starving is the work cut out for the diabetic. Believe me, it is no light task.

Therefore, begging your indulgence, I shall relate the interesting and, to me, surprising experience with the patient from whose case I learned how to conduct a treatment which previously I had looked upon as unsatisfactory.

In October, 1916, a boy 12 years old was brought to me because of weakness and a rapid loss of weight. These symptoms had been noticed for the preceding two or three months, but the extraordinary appetite of the boy made it difficult for the parents to comprehend that anything serious could be troubling him. They were finally alarmed by weakness which amounted to staggering when he walked. One drop of urine was found to precipitate 5 mils Benedict's solution to a bright brick-dust red, showing the percentage of sugar to very high.

Frederick M. Allen, of the Rockfeller Institute, had published some experiental studies concerning diabetes in the Journal A. M. A., in September 1914, which I had read at the time with interest. He had felt justified by the results of his animal studies in treating a limited number of patients by a method based upon the principles derived from the experimental work. The results obtained showed apparently that a diabetic patient could be rendered sugar free by the same method. He thereupon formulated the method known as the Allen treatment, and laid down rules, which remain unchanged except in unimportant details. In the September 30, 1916, issue of the Journal A. M. A., and sev-

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

eral succeeding issues the treatment of diabetes by the Allen method was covered in the department of therapeutic, I read these several articles, rather casually and the word "starvation" had fixed itself in my mind—that is, preliminary starvation to clear the blood of sugar.

Therefore, for this boy I prescribed a three days' fast, to be followed by a diet made up out of my previous practice and my new idea. It was a greatly restricted diet as to quantity, and the lad had the abnormal appetite which is one of the characteristics of the disease, fortified by three days, abstention from food. It soon became plain that his parents could not restrain him—he took by whatever means were handiest whatever food he craved, and grew sly and crafty in getting the prohibited articles. Therefore his transfer to a sanitarium was advised, and one was chosen which advertises special attention to the treatment of diabetes.

He remained there a month, on a limited diet, chosen without apparent scientific method. He was then given a booklet and allowed to come home, ate freely enroute of such food as he had been deprived and opportunity offered, and on Novembr 27, 1916, when I saw him again, the percentage of sugar in his urine was approximately 12, and his condition was in every respect worse than it had ever been before. The physician at the santarium wrote me a very pessimistic letter, considering his case as very unpromising. At no time under his care had the urine been free from sugar.

I then put it up to the boy himself, after explaining to him the danger of his condition, to decide whether he would remain under my direction in charge of a trained nurse in a home other than his own or go to another sanitarium.

He decided to remain under my care. Meanwhile I had begun at the beginning and studied the principles of the Allen treatment, and its practical application in the circumstanes of this patient.

The boy was put in charge of a trained nurse in her own home, who was instructed to be with him every momentt of the twenty-four hours of every day, except for very brief periods of necessary relief, when her mother a sensible and intelligent woman, took her place. The boy was put to bed, because of weakness and emaciation, during his starvation period. He was allowed nothing but water, but this was urged upon him. The nurse was taught to make the routine tests for specific gravity, acidity, albumin and sugar. Albumin was present in the beginning, as I have frequently found to be the case. Tests were regularly made twice daily, a record of the twenty-four hours urine was maintained day after day, as also the amount of fluids taken. From the beginning the nurse and the lad himself received daily instructions as to the principles of the treatment,the method it was necessary to pursue, and the results which might be hoped for. An outfit consisting of scales, urine testing apparatus and food charts had been supplied, and soon the nurse had mastered the technic of their use, and it was not long until the boy caught her enthusiasm and became equally interested and adept.

His fast began December 3.

His urine, tested on November 29, was 55 oz. for the twenty-four hours, sp. gr. 1.040, contained albumin and a sugar percentage of twelve.

During the first three days he consuumed large quantities of water, was drowsy throughout the twenty-four hours, and complained on rousing that he felt intensely weak. Dec. 6, at the end of three days' fast, his record shows that he slept well, and said he felt as well as when he began his fast, but felt weaker. His morning urine test gave the twenty-four hour quantity as 46 oz., sp. gr., 1.016, two drops slightly reducing 5 mils Benedict's solution. His temperature was below 98, pulse 60 to 64, respirations 16. The nurse reported him as cheerful. A cathartic pill, reinforced by a suds enema removed hard lumps and a large amount of fecal matter.

December 7 his record states that he was awake but once during the night to pass urine. The morning test showed 48 oz., of sp. gr. 1.016; three drops reduced 5 mil. Benedict's solution. In the afternoon test seven drops were required to reduce the 5 mil test solution. The pulse ran at 60, temperature at 97.4 F. throughout the day. He complained of such extreme weakness, saying he thought he could not survive unless he received food, that I decided to use his imagination, and he was given, at 5:30 p. m., a tablespoonful of cabbage which had been boiled through three waters for an hour each time, and the water discarded. The record says: "He feels much better to-night than he did last night."

December 8, his fifth day of fasting, his record says: "He slept well and says he feels all right." He was given, at 8 a. m., another tablespoonful of the thrice boiled cabbage. His morning test showed the twenty-four hour amount to be 30 oz., of sp. gr. 1.012, and ten drops were required to reduce the test solution. He was stronger, and was up and dressed from 1 p. m. until 4 p. m. On this afternoon 2 oz. lettuce,4 oz. tomato and 1 oz. bran bread were divided into two portions, one of which he took at 1 p. m., the other at 5 p. m.

December 9, the sixth day after the beginning of the fast, his record says he slept well, had a good early morning bowel movement, and his urine test showed 28 oz. for the twenty-four hours sp. gr. 1.016. Eighteen drops required for the usual test. In the afternoon twenty-three drops were required to effect the usual reduction. He was up and dressed from 2 p. m. till 5 p. m. His temperature dropped to 96.8 at 7 p. m. and his pulse to 52. At the same hour the record reads: "Says he feels all right except very hungry." On this day he received 2 oz. lettuce, 4 oz. tomato , 6 oz. cabbage, and 1½ oz. bran bread, the whole being divided and served in three meals.

The first day after his fast he received six grams available carbo-hydrates, of a total fuel value of thirty-six calories. This second day he received twelve grams available carbohydrate of a total calory value of seventy-two.

December 10 his record shows 31 oz. urine of 1.013 sp. gr. Ten drops turned 5 mils test solution very green. At 8 p. m. his temperature was 96.8 and 44. His food schedule for the day was 2 oz. lettuce, 6 oz. asparagus, 6 oz. pumpkin, 4 oz. tomato, 1½ oz. bran bread, 18 grams carbo hydrates fuel value. 108.

December 11, the eighth day after the beginning of his fast, his food schedule called for a total carbo-hydrate value of 24 grams, protein, 18 grams, fat 5 grams; total calory value 219. As the afternoon test of that day required but three drops of urine to reduce the usual quantity of the test solution, it was believed that the upper limit of carbohydrate tolerance had been exceeded; therefore the schedule was cut to 18 grams of carbo-hydrates on the twelfth, with an immediate fall to twelve and fourteen drops in the test for the morning and afternoon respectively.

December 13 it was noted that his feet and legs to the knees were swollen and his face and eyelids puffy. His bowel movements were now large and natural, a striking change which takes place in most cases on this diet.

December 14 his diet schedule allowed 540 grams of 5 per cent vegetables, 8 oz. of coffee, 1 egg, 2 oz. lean meat, 6 ox. of beef broth. The total grams protein were 35, fat 11, carbo-hydrates 18, calories 321. The morning analysis showed 34 oz. sp. gr. 1.013, requiring twenty-two drops to reduce. In the afternoon twenty-four drops were needed.

December 15 the record shows he slept all night without waking, his morning temperature was 96.4, pulse 50. That morning thirty-one drops of urine were required to reduce the test solution. The albumin had now disappeared from the urine. His entire body was more or less oedematous. He walked thirty rods out-of-doors. The total calories were advanced to 454 and the carbohydrates to 24 grams. December 16 and 17 were uneventful except that he expressed himself as feeling fine, and the diet was increased in proteins and fats.

December 18, fifteen days after beginning his fast, the report reads: "Slept all night without waking. Says he feels better than ever, and breakfast filled him up more than any meal yet." He had taken 45 oz. of fluids, passed 62 ounces of urine, of 1.018 sp. gr., requiring fifty drops to show any reduction of 5 mils Benedict's solution. His temperature a. m. was 96.2, p. m. 98.8. There was no albumin in the urine. The oedema was gone except in the feet and ankles, where slight puffiness remained. He was spending much of the day out of doors. His diet schedule called for 18 ounces 5 per cent vegetables, 3 ounces 10 per cent vegetables, 2 eggs, 6 ounces lean meat, 8 ounces coffee, ½ ounce cream, ½ a grapefruit, and 6 ounces beef broth. The total available protein in this schedule was 76 grams, fat 31 grams, carbo-hydrate 29.5 grams, calories 716. December 20 he had a fast day, on which the carbo-hydrates were reduced to 6.5 grams, the protein to 7.7 grams, the fat to 3 grams, total calories to 84; and thereafter, upon one day each week he was made to observe one day of fasting.

He was kept under the strict surveilance of the nurse for six weeks, during which he learned by constant teaching and a few sharp lessons just what he had to do to keep his urine sugar free. His days were spent out-of-doors, hunting and trapping, and he continued to grow stronger in both body and will. Once he walked down the frozen river five miles to town and back without announcing his trip in advance. On his return he denied having eaten any food whatever, but when his test promptly convicted him of both indulgence and lying he admitted it and accepted the penalizing fast cheerfully until his urine was again sugar free for a day or two. That and a couple of other similar experiences were made the occasion for promptly putting him upon a fast and impressing him with the reason and necessity therefore. He learned to make the urine tests accurately, to keep complete records of his daily meals and tests, to vary his diet and prepare his meals within the prescribed limits; and when he finally went home he was so well educated and firmly grounded that he would not vary in the least from his schedule.

He continued to improve throughout the following ten months, worked in the fields on his father's farm during the summer, pursued a natural growth in height and weight, and this very well-being was a great temptation to one of his character. He reported to the office every two days at first, twice a week later, then once a week and once a month, finally stopping altogether. He kept and produced his records of urine tests and diet schedules as directed. His carbo-hydrate tolerance increased gradually to approximately 30 grams daily. Late in the fall of 1917, in the full flush of growing and apparently healthy boy-hood, he began to clandestinely break diet, and the detective instinct of his mother discovered it and she reported in distress that his test had "gone down." At first with the fall of his test, he was alarmed and went back to fasting and his strict schedule until his test became normal again. Later he would not do it. His parents finally gave up as useless any attempt to advise him or control him, and for the past few months he has been entirely out of control. When he grows weak and thin he returns voluntarily to his schedule until better. He has a perfect understanding of his condition, keeps up his urine tests, and has thus far been able to restore himself before too late. The ending, however, would scarcely seem to be in doubt. The point I wish to make is that his education served to impose an element of control into a case that without it would have long since gone the way those cases usually go.

Since December 1, 1916, there have been sixteen cases in my practice which have been diagnosed as diabetes. Five of these have been seen for diagnosis only and have returned home without having been put on treatment.

Five cases have occurred in pregnant women. Regarding these, it is well known that glycosuria happens fairly often in pregnant women. These five women without exception consulted me on account of disturbing symptoms, not because they were pregnant. I do not care to discuss diabetes in pregnancy at this time, but shall merely say that each of these women was put under the same method of treatment as already indicated, and observed with the same care. All responded, with the relief of all symptoms. Three of them have now been confined without incident. The other two are now approaching the end of pregnancy strong and hopeful.

Besides the pregnant diabetics there have been six cases, five in addition to the one reported at length. Essentially the same method was followed with the others, except that it has not been necessary to employ a trained nurse. One of the patients is a brother of case 1; another is a sister of one of the pregnancy cases. These two latter had a brother die some years ago of diabetes.

The age of case 2 at the time treatment began was 12; of case 4 was 15; of case 3 was 52; of case 5 was 24; of case 6 was 62. Three of the cases consider themselves entirely well, and their tests do not show any sugar accumulation, though they are eating whatever their appetite calls for.

Of the two cases under treatment one is now 14 years of age, and growing normally though he is not able to dispose of more than twenty-five to thirty grams of carbohydrates daily. The last is a patient 62 years of age, with a comparatively high tolerance.

A few practical suggestions for securing control fall under the survey of this paper. A patient undergoing the preliminary starvation and subsequent dietary experiments to ascertain his point of tolerance should be seen by his physician daily, and a close and accurate record kept of his condition. It is the only method of getting him surely into the safety zone as to diet, and it provides the opportunity of training him so he will remain there.

Again, it is far easier to train a younger member of the family as the nurse in the case. These catch on in a very few lessons, and soon come to understand surprisingly well what we are getting at. As for the youthful patients, they themselves should be taught every detail of the management, but it is also advisable that the mother of the family should understand what is required.

Success will come easier by making the menu as varied, full and tasteful as the conditions warrant. To that end someone in the family must be interested in preparing dishes within the permitted schedule.

To take the place of the prescribed bread which patients find hardest to bear, I can testify to the excellence of the muffins made from Lister Bros. casein flour. If bran is used it must be thoroughly washed. Sacchlarine is also a help.

Fortunately physical activity is to be encouraged in most cases. Extreme weakness may make confinemnet to bed advisable during the early starvation period, but active exercise to the point of fatigue increases the consumption of sugar and raises the point of tolerance. This is a great aid in keeping the patient in control.

It is hardly necessary to remind you that the entire family as well as the patient must be interested and cooperating if the control of the patient is to be assured. Where the patient is old and the family ignorant, the conditions are discouraging.

Finally, inspite of the fact that the method advocated seems to be a routine method, each diabetic offers one or more special and individual problems which will test the patience and ingenuity of his physician, and keep him from thinking that he has learned all there is to learn about diabetes and the control of diabetics.

**A. B. Somers, Omaha.**—One question. As to the ultimate results in case of a young man 19 years old. Is such a person as that likely to be persistent in the treatment and make a good recovery? I do not have much trouble in controlling diabetes in men past middle life. One more thought, in pregnant women it is usually a milk sugar diabetes and not a grape sugar, and is very seldom a serious problem.

**Dr. McGrew, closing:** The point that Dr. Dunn made in referring to an increased quantity of carbohydrates in the diet for a short time is a very good one. When a severe acidosis occurs in the course of treatment, I have found in a number of instances that the addition of more carbohydrates than the schedule warranted for a few days was a very manifest help in getting rid of the acidosis and in putting the patient (in some manner I cannot explain) upon a basis that enabled him to go on and get entirely sugar free.

As to the question which was asked by Dr. Somers in regard to milk sugar—whether the diabetes in pregnancy is not a milk sugar diabetes—I would say it is not in my experience. None of the cases that I have reported here have been milk sugar diabetes. They have all had the same form of diabetes, and under the same treatment all have cleared up in the same way. I think the idea of the diabetes of pregnancy being a milk sugar diabetes is one that has been handed down. Appropriate tests will show that the urine sugar of pregnancy diabetes is glucose just as it is in non-pregnant cases.

## Mechanical Ileus Due to Twisted Pedicle of Cystic Ovary.*

P. H. Salter, M. D., Norfolk.

In looking through the rather limited literature at my command I have been unable to find any cases recorded of acute obstruction of the bowel caused by gut being caught in the twist of an ovarian cyst-pedicle. Within the last two or three years it has been my fortune to see two such cases and as they must be rare I thought them worth reporting.

Mrs. E., of Stanton, a young woman of 17 years was four months pregnant with her first child. She had been usually well up to the time of the attack. There had been some morning sickness but not enough to affect her general health to any marked degree. She did not have symptoms of ovarian disease. Her menses had been regular until the beginning of pregnancy, with no excessive flow. She had painful menstruation as a girl—never had consulted a physician. She was taken sick early one morning with pain in abdomen and vomiting. Dr. Peters of Stanton was called. He found her suffering with all the symptoms of acute obstruction of the bowels. He carried out the usual treatment with no results. In the afternoon I was called in consultation and as her condition was growing critical I advised operating. She was moved to the Norfolk General Hospital and preparations made for an immediate operation. Under ether a distinct tumor about the size of an orange could be felt under the border of the ribs on the left side lying above the pregnant uterus. The abdomen was opened in the mid line. The cavity was filled with an amber fluid. The uterus was normal and of about the right size for a four month pregnancy, but was pushed somewhat to the right. Above it and on the left side was a dark, round fluctuating mass about the size of a large orange which was recognized as the left ovary, cystic, connected to the uterus by a long pedicle which was twisted by what appeared to be two complete tumors. About two inches from the tumor was quite a distinct mass which proved, on untwisting the pedicle, to be the descending colon caught up in a loop or what appeared at first to be a diverticulum. This was easily found and the bowel which had been quite dark began to assume a better color as the circulation was restored, and straightened out in its normal position, the apparent diverticulum gradually disappearing. The pedicle was ligated and tumor removed. The abdomen closed. She made an uneventful recovery and pregnancy went on to term without any further complications.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

Case II. Hilda P., a little girl 11 years of age had been operated for pus appendix some six months before the present trouble. At that time there was a large abscess cavity extending to the bottom of the pelvis, which was opened and drained without removing the appendix. She had a stormy convalesence covering a period of some five or six weeks. One of the complications being obstruction of the bowel which required puncture to be relieved. She fully recovered and regained normal health and was well for some three or four months. She was taken suddenly ill with severe pain in the right iliac region and symptoms of acute obstruction of the bowel. Dr. Brush saw her in the evening and diagnosed an acute obstruction of the bowel probably from an adhesive band, a result of the old condition. I saw her next morning in consultation and advised immediate operation. She was removed to the hospital and on opening the abdomen through the old scar we were surprised to find a large cystic ovary about five inches in diameter, very dark in color. It had a long pedicle which was twisted and caught in the twist was a loop of ilium. The bowel was much congested and distended. The lumen was completely closed. On untwisting the pedicle the bowel was released and resumed its normal color within a few minutes. The cystic ovary was removed, and the abdomen closed. She made an uninterrupted recovery and has been well since.

## Actual Benefit to Surgery Derived From the Present War.*

R. R. Hollister, M. D.

In a subject of this kind it is not out of place to review briefly what has been accomplished in this direction in other wars in order to weigh the work going on at the present time.

One of the first was Pare who had the courage to use the ligature, after the boiling oil had given out, to staunch hemorrhage after amputation necessitated by wounds in battle; later came Hennen's Military Surgery written in the 18th century. Guthrie, a Scotchman of great common sense, was with Wellington in the campaign of the Peninsular war, and as a result came to the conclusion that both ends of a severed artery should be tied to stop bleeding. Among John Hunter's works, which are always illuminating, are those on gunshot wounds. Probably the man of greatest experience in war surgery that the world has ever seen, was Baron Larrey who followed Napoleon in the first of all of his thirteen or fourteen wars, saw a great deal and afterwards gave us his admirable memoirs in which he relates doing an amputation of the thigh in two minutes on the field of battle under fire, saving his man. Another instance of his achievement may be seen in the fact that eleven of fourteen amputations at the shoulder joint recovered; this, too, in the period between 1800 and 1815, the principal points being that the flaps were so arranged that drainage be free, and left wide open, with dressings saturated with wine. Not so different from our modern procedure. Other epoch marking works are Longmore on the Crimean war, Esmarch on the Schleswig-Holstein war, Otis on the war of the Rebellion and Billroth on the Franco-Prussian war.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

At the outset it must be understood that civil surgery and war surgery are not identical. In brief, in war, you are dealing with young selected men in excellent health, but at times conditions are not favorable for the best immediate attention, so in drawing conclusions to apply to civil work we must not be too hasty.

I. Experimental work on Surgical Shock has received a great deal of attention in the present war deservedly for no two physiologists nor clinicians agree, therefore there must be a good deal to be found out. The most promient theories have been Crites' that the vaso-motor system was exhausted; and Henderson's, that the carbon dioxide content of the blood was lowered. As to the actual work done in France Archibald and McLean from their eighteen months in France, record that in wounds of head and chest shock is very rare, while it was marked in wounds of the abdomen and extremities. In their work at the casualty clearing stations they found low temperature and low blood pressure. The treatment found most effective was external heat, low position of head, intravenous salt and bandaging of the extremities.

Porter began his experimental work in first line trench in 1916 finding the life here almost as normal as in Boston. He noted that in fractures of the femur and the abdominal wall, with laceration of fat tissue, shock was pronounced, due to fat embolism. Further observation convinced him that it was the principal cause of shock. Porter tried out Henderson's theory of lack of carbon dioxide in the blood by putting the head of the man to be treated in a box into which carbon dioxide was led. His rule was to stop when he had doubled the respirations. This worked well in some cases but not in all. Henderson's method is certainly simpler as acoding to his plan one rebreathes his own air from a bag connected by a mask. A committee appointed by the National Research Council has brought in the subject of acidosis and its possible connection with shock. So it is easy to be seen that links have been forged but the chain is not complete.

### Treatment of Infected Wounds.

II. In the field of surgery the treatment of infected wounds had been relegated to the background and often turned over to the junior internes to watch and dress on account of the danger of infecting the clean cases which far outnumbered them. Since the beginning of this war, in the army, are wounds almost all infected and the tables are reversed. The generation of surgeons surviving the wars of the middle of the nineteenth century treated infected wounds well but the material at hand was small, the result being that the younger generation was not conversant with them. On the ontbreak of the present conflict in 1914 it was seen notably by Carrel that here was a chance for improvement. The plan worked out by him as you all know is thorough opening of the infected area and the placing of tubes and gauze so that the infected surface is constantly bathed with a fresh solution elaborated by himself and Dakin which gives off chlorine. Not that the use of chlorine is anything new for Labarraques' solution has been of distinct use in medicine for the last twenty years at least. Carrel and Dakin however have modified this, so that their solution is of a constant strength and reaction, which gives better results. At present there is some controversy as to the value of this method. Its opponents say the technique is too complicated for war work. On the other hand those who have seen most of it, speak unhesitatingly in its favor. If the method is too intricate it is entirely within the realm of reason, that it may be simplified in some such way as the Philadelphia school is now working with Dichloramine T. From what I have seen and read, I believe this a distinct advance in the treatment of infected wounds. In the treatment of perforating abdominal wounds there have been two sides since the beginning of antiseptic surgery. One intervening, the other expectant treatment.

In New York City where the first successful cases were treated by laparotomy the statistics of Dr. W. T. Bull show about the same percentage of recoveries with and without operation, the mortality being about 75%. Abadie a French surgeon who has just come out with a book on perforating wounds of the abdomen in a series of nearly five hundred cases has been able to save about half of his cases, the mortality ranging from one-third in the clean perforating cases to two-thirds in shell wounds of the abdomen. These are the best results I have seen and show what can be done by a good man, who has his hand in, working under favorable conditions. In working on scattered cases, in civil life his results would probably be worse.

III. To my mind the domain of medicine that will profit most by this war is the surgery of deformity, orthopedics. For the last fifty years the orthopedist has been plodding along busying himself with crooked feet, crooked legs and crooked backs, drawing a quiet smile from the general surgeon, who was boldly attacking the appendix, gall-bladder and stomach. It was indeed fortunate for the cause, that a man of the type of Col. Robert Jones was available to do the work, and that he was at once recognized by the British army medical service and given control. He has organized some fifteen or twenty large hospitals in England to do the reconstruction work on the soldiers, and how well it is done may be judged from the fact that of three hundred wounded soldiers returned to London as hopeless cripples, two hundred and twenty-five were able to go back to the firing line within one year through the efforts of the trained orthopedic surgeon. Experience has shown that over fifty percent of the wounded present deformities which the well trained general surgeon cannot treat successfully, Col. Jones's book, "Notes on Military Orthopedics,' should be read by every one of you. It is divided into seven chapters with the following titles:

1. Position of election for ankylosis following gunshot injuries of joints.

2. Sutures of nerves, and alternative methods of treatment by transplantation of tendon.

3. The soldier's foot, and the treatment of common deformities of the foot.

4. Malunited and ununited fractures.

5. Transplantation of bone, and some uses of the bone graft.

6. Disabilities of the knee-joint.

7. The mechanical treatment of fractures under war conditions.

It is not possible for me to summarize these chapters as each chapter is a summary of his experience which is very large. In times of peace I understand that he is in the habit of doing from fiften to twenty operations a day besides his office work. His methods are models of simplicity as is seen in his way of maintaining acute flexion at the elbow after elbow injuries, by tying a large handkerchief around the wrist then around the neck. From his description it is possible to treat most fractures of the arm or leg with a simple Thomas knee splint. He does all his work with splints in contrast to Osgood who uses plaster of Paris a great deal. Jones' quarrel with plaster is that it is too tight and likely to cause sloughs when poorly applied.

I do not think for a minute that I have covered this field completely. My concern is that the lessons we are learning will be forgotten only to be rediscovered at some future time precisely as we have been giving up antiseptic surgery for aseptic surgery and are now again finding that we need our antiseptics as we did in the days of Lister.

### Discussion

**Dr. J. S. Welch, Lincoln.**—This was strictly to the point; but in his address, the doctor excluded a thing or two which I expected him to mention. I refer to the use of paraffine in some form in the care of extensive burns. I want to refer to that here, because I think it is so applicable to all of us because of its successful use, in a large percentage of the cases. You and I will not have so many of those cases. As Dr. Sternberg has said, they come to us rarely but we will have burns of various degree and proportions, and it is certainly most necessary to have in mind something which will hasten the repair of skin in these cases. There are few cases which torment you more than an extensive burn, under the old method of treatment. Include, if you will, even skin grafting. They are much slower than under the paraffine. I want to include the use of the dichloramine-T in the treatment of burns. If it is used after the technique recommended by the Pennsylvania people, I think you will find infection not only subsides more quickly, but that you get the same helpful aid in skin protection and cell traveling that you do with the paraffine alone.

### Discussion.

**Major John P. Lord, Ft. Riley.**—The world has been benefitted by having had this cataclysm thrust upon it, and brought world problems, making us keen students of world history; making it necessary for us to make readjustments in our mental attitude, and our duties to one another, and to our patients; and while it has brought these enormous benefits in actual practice in special lines of surgery, I think that the great big advantage arising from recruiting is going to come later in the prevention of the many conditions found only by systematic examinations of millions of men.

It has brought to our attention the fact that we have in the supposed yeomanry of our country—the young soldiers mustered into the service—a large percentage of potential cripples. Ignorance of their condition led to the belief that it was necessary to suffer these things. We now find it unnecessary, if attention can be brought to the condition before the aggravated condition has developed. In the examination of five thousand troops ordered examined for the purpose of a new shoe tariff, I was called into the presence of the commanding general of the Eighty-ninth division who said that he would like to have me observe also the misfits—the foot deformities and to acquire other information as would be of value. I cannot refer to all of this for lack of time. Suffice it to say that 35 per cent of five thousand soldiers supposedly fit for the army had foot symptoms, and were complaining. Many of these men had claw feet, flat feet, bunions, overriding toes, hammer toes, callouses, and especially frequent was anterior arch trouble produced by one thing only—wearing shoes too small and too narrow habitually. Ask these men how they got on with their farm work, and they would say, "we have riding machinery." They ride their horses to and from the field, and after supper ride the automobile to town. They could wear the same shoes we wear and we spend half our time sitting in a swivel chair. Thus shod they could not be efficient soldiers.

It was found that a large percentage of these troops had bad teeth or tonsils. Many had, therefore, neuralgia and rheumatism and other complaints as the result. Heretofore they were ignorant of these conditions. This information that these men have acquired will be carried broadcast throughout our country. It will not be many years, therefore, before we will have legislation that will authorize universal school inspection, and public health laboratories, where it will be possible for any citizen to have a diagnosis of his case. This will become particularly valuable in the declining years of life, when things are apt to go wrong, that people will have, publicly or privately, examinations which will point out the difficulty, and perhaps add years to their length of life.

We have been too individualistic in practice. Each fellow had his favorite way of treating a fracture. Now we are standardizing. This will lead to uniform methods of practice, not only in this particular line but in everything.

A great many semilunar cartliages have been found to be loose and a disturbing factor in the army. A man in civil practice develops a little trouble in his knee. Put him into the infantry and he can't stay there. By way of commenting on improved methods, on the other side they find that the semilunars can be removed, the wound sewed up and the men put on their feet the next day. A practice too common hitherto has been that knee joints have entered the holy of holies! We must not allow motion to interfere with subsequent function! We put it into a plaster case. The man is disabled from one to several months before he gets full function. The other way it is only two or three weeks. We are learning many things by the object lessons of this war.

When this war first broke out we were unready. We sent our troops into these camps. They brought their infections from every part of the country. Some had mumps, some measles, some scarlet fever —this, that and the other thing. If they didn't have them they brought the germs with them. They went into close quarters and close contact and developed various infectious maladies, and the whole barracks was infected. How now? A detention camp. They go there for two or three weeks. If they have any of these things to develop, they develop them, and while there get all their inoculations, also. Thus infections are absolutely controlled.

I thank you.

---

## Medical Aid and Selective Service Draft.

Dr. A. F. Jonas, a member of the Medical Reserve Corps, has been detailed for active duty as Aide to the Governor and he is now acting in that capacity. At present he is holding conference with the medical members of the Local Exemption Boards and all members of the Medical Advisory Boards in various sections of the state. Conferences recently have been held at Omaha, Lincoln, North Platte, Hastings and Norfolk. Other conferences are planned. The new rules for physical examinations of registrants and other matters pertaining to the draft have been discussed. The attendance has been large. The greatest possible interest has been manifested. Members have shown great earnestness, unbounded enthusiasm and a patriotic duty has been uppermost in the minds and hearts of all. The conferences tend to greater uniformity in methods of examination and in the decision of examiners. All boards are confronted by problems that require keen perception and careful judgment. Every examiner is impressed with the importance of two pressing duties. He must be just to the registrant and to the government alike. The army needs every qualified man and none that are physically, mentally or morally defective. There are many cases that are difficult to decide. These uncertain cases are discussed at these conferences resulting in a benefit to all and materially clearing away many uncertainties. Many inconsistencies contained under the earlier rules for physical examinations have been eliminated, experience having shown many the rules were too stringent in some directions and perhaps too lenient in others. A revision of the rules has resulted in greater justice to the army and the registrant.

The following is a brief outline of the organization of the personnel concerned with the physical investigation of registrants. This organization determines whether a registrant is to be immediately inducted into the military service or whether he is to be placed in a deferred class on account of remediable defects or if he will be fit for certain special duties other than that of an active combatant or if he is totally unfit for service in any branch of the army.

"The Selective Service Law was enacted by Congress May 18, 1917, entitled, 'An Act to authorize the president to increase temporarily the military establishment of the United States.' Under the Secretary of War the office of the Provost Marshal General is charged with the supervision of all matters relating to the selective draft.

"The governors shall be charged with general supervision over all matters arising in the execution of the selective draft within this state. Governors are charged with the organization of Medical and Legal advisory boards throughout the states.

"The president having established in pursuance of the authority of section 4 of the Selective Service Law, a local board or boards in each county in each state and one for approximately each 30,000 of the population in each city of 30,000 or over, each of said boards shall exercise its jurisdiction and functions within its established territorial limits.

"The local board is composed of three members, one of whom is a licensed physician, who acts as the examining physician of the board, additional medical examiners may be appointed when more than thirty registrants are examined daily. Each local board has jurisdiction in its territory in respect of persons who are registered therein.

"Medical advisory boards have been created to whom are referred all registrants in whose case the medical examiner is in doubt as to their physical fitness, or cases that require expert examinations and opinions or cases when the registrant himself is dissatisfied with the decision or opinion of the examiner of the local board.

"Medical advisory boards have no power to determine finally whether the registrant shall be accepted or rejected. Their function is only advisory. The power of acceptance or rejection is placed by the Selective Service Law in the local and district boards of exemption. The function of the medical advisory boards are, as the name imports, to examine registrants referred to them by the exemption boards and State Adjutant's General and to return the result of this examination's"——". "The local boards may proceed to a final determination concerning the physical qualifications of each registrant."

"All medical advisory boards shall be composed of no less than three licensed medical practitioners and one licensed dentist. Preferably these boards should be composed of a number of specialists and be located in large cities where hospital and laboratory facilities are at hand. The members of the board should be men of special experience in the following specialties: general medicine, neurology, heart and lungs, tuberculosis, general surgery, eye, ear, nose and throat, orthopedic surgery, genito-urinary diseases, syphilis, skin diseases, pathology, bacteriology and roentgenology. In a state of so large an area as Nebraska this plan proved not to be practical for all sections of the state, it was therefore determined to appoint an advisory board for each local board, consequently there are eighty-three advisory boards. There are in each of the cities of Lincoln and Omaha one large board composed of specialties. When cases arise in remote communities requiring special examinations they are referred to the larger boards.

"To assist the Governor in this work a member of the Officers Medical Reserve Corps of the Medical Department will be ordered to active duty to report to the Governor for a sufficient time to accomplish this organization. The duties of the Aide have been greatly extended. The medical aide to the Governor should be the instrument of direct communication between the Governor or his Adjutant General and the local boards and medical advisory boards in all matters concerning questions relating to that part of the Selective Service regulations which pertains to the physical examinations of registrants.

"District boards have been established by the president, one for every federal judiciary district. These boards are composed of five members. District boards have appellate jurisdiction over all decisions of local boards including the findings of the local boards as to physical qualifications, but in considering appeals as to physical qualifications the district board may not conduct any new physical examinations or receive or consider any evidence not considered by the local board. Within five days after the date presented any registrant may make a claim of appeal to the district board from the findings of the local board as to his physical qualifications for military service."

### Procaine and Novocaine Identical.

It appears that in certain quarters the attitude is taken that the local anesthetic sold as Procaine is not identical with that marketed as Novocaine. The Subcommittee on Synthetic Drugs of the National Research Council believes it important that this misunderstanding should be corrected and hence offers the following explanation:

The monohydrochloride of para-aminobenzoyldiethyl-amino-ethanol, which was formerly made in Germany by the Farbwerke vorm. Meister, Lucius and Bruening, Hoechst A. M., and sold under the trademarked name Novocaine, is now manufactured in the United States. Under the provisions of the Trading with the Enemy Act, the federal trade commission has taken over the patent that gave monoply for the manufacture and sale of the local anesthetic to the German corporation, and has issued licenses to American concerns for the manufacture of the product. This license makes it a condition that the product first introduced under the proprietary name "Novocaine" shall be called Procaine, and that it shall in every way be the same as the article formerly obtained from Germany. To insure this identity with the German Novocaine, the federal trade commission has submitted the product of each firm licensed to the A. M. A. Chemical Laboratory to establish its chemical identity and purity, and to the Cornell pharmacologist, Dr. R. A. Hatcher, to determine that it was not unduly toxic.

So far, the following firms have been licensed to manufacture and sell Procaine:

The Abbott Laboratories, Ravenswood, Chicago.

Farbwerke-Hoechst Company, New York, N. Y.

Rector Chemical Co., Inc., New York, N. Y.

Calco Chemical Company, Bound Brook, N. J.

Of these, the first three firms are offering their products for sale at this time, and have secured their admission to New and Nonofficial Remedies as brands of Procaine which comply with the New and Nonofficial Remedies standards.

While all firms are required to sell their product under the official name "Procaine," the Farbwerke-Hoechst company is permitted to use the trade designation "Novocaine" in addition, since it holds the right to this designation by virtue of trademark registration.

In conclusion: Procaine is identical with the substance first introduced as Novocaine. In the interest of rational nomenclature, the first term should be used in prescriptions and scientific contributions. If it is deemed necessary to designate the product of a particular firm, this may be done by writing Procaine-Abbott, Procaine-Rector, or Procaine-Farbwerke (or Procaine-Novocaine brand).

Yours truly,

Julius Stieglitz.

Chairman Subcommittee on Synthetic Drugs,
National Research Council.

## Abstracts.

### Wood Alcohol Poisoning.

A. O. Gettler and A. V. St. George.

(Nervous and Mental Disease, April, 1918)

These writers say that national prohibition will undoubtedly lead to much "moonshining," adulteration and dilution of liquor. This is evident from the recent increase of cases of wood alcohol poisoning, six of them fatal. Such cases, the writers believe, will become still more frequent in the future in spite of rigid measures against adulteration. A warning, they think, is due to physicians, coroners and health officers as to these possibilities. Refined wood alcohol tastes like ethyl alcohol and is considerably cheaper, hence the probability of its use by ignorant dealers in liquor adulteration. The authors report the findings in the six fatal cases. The diagnostic features of acute wood alcohol poisoning are extreme physical weakness, acute gastrointestinal symyptoms, blindness, and deep coma ending in collapse and death.

In the chronic cases, blindness is the chief feature. A differential diagnosis from epilepsy, and especially from all types of coma, must be made. This is frequently difficult. But we should be suspicious, at least, of wood alcohol poisoning in these cases. To be of any value, treatment must be prompt. It consists essentially of getting rid of the poison in the body, and of supportive measures. The poison is slowly and incompletely oxidized in the system into still more dangerous poisons, namely, formaldehyde and formic acid and as such very slowly eliminated by the kidneys. The stomach should be washed out early and frequently and the washings tested for wood alcohol. Intravenous saline or sodium bicarbonate infusions and phlebotomy and transfusions, if the latter can be had quickly, should be employed. In addition to warmth and strong stimulation with strychnine, digitalis, caffein, camphor, epinephrin and oxygen must be given. The authors doubt the value of ethyl alcohol to replace the methyl product. For the treatment of the chronic cases they refer the reader to the article by Buller and Wood in the Journal, Oct. 1, 1904, and that of Birsch-Hirschfeld in Von Graefe's Archiv. The postmortems in four of the fatal cases showed, as gross appearances, marked cerebral congestion with increased cerebrospinal fluid; also marked visceral congestion and acute pulmonary edema and congestion. In addition, the heart and vessels contained only dark fluid blood. In one of two cases there was pulmonary tuberculosis and in the other, degeneration of the kidneys and liver. A chemical analysis of parts of the brain was made in all six cases and methyl alcohol poisoning found. It is important, the writers say, to note that there is a dangerous common use of refined wood alcohol in the preparation of essences, for flavoring Florida water, witch hazel, etc. They suggest, therefore, suitable legislation for the prohibition of the sale of wood alcohol for domestic uses—measures similar to laws now existing in England and Germany.

## Poliomyelitis in Sweden.

By Wernstedt.

(Nervous and Mental Disease, April, 1918)

The author conducted extensive research on poliomyelitis during the 1911-1913 epidemic, and with his co-workers proved the existence of healthy carriers and other important epidemiologic data. Wernstedt here gives the minute details of the epidemic and of their research, his report filling over 300 pages with numerous tables, maps and data compiled from a question blank sent to physicians and medical institutions throughout the country. Of the total 6,775 cases, 24.2 percent were in patients of fifteen or more. The youngest were five and fourteen days, the oldest seventy-eight and seventy-nine years old. In the overwhelming majority of cases the incubation period was from four to seven days. A tendency to ataxia or spasticity should always suggest possibly oncoming poliomyelitis. Sometimes this did not attract attention until another case of frank poliomyelitis developed in the family. He warns that every case of diarrhoea, sore throat and bronchitis should be regarded with suspicion when poliomyelitis is prevailing. Pains in the legs and even swelling of joints may be encountered with early poliomyelitis. Polyneuritis generally develops symmetrically, and has a longer course, without acute fever. Meningeal symptoms may accompany the poliomyelitis, but there is no opisthotonus, and poliomyelitis is a summer disease in comparison to epidemic meningitis, which occurs usually in winter. The lumbar puncture fluid is clear with poliomyelitis. In one of the cases the symptoms were mistaken for appendicitis and an operation was done; a few days later the characteristic paralysis of legs and bladder developed. In another case an emergency tracheotomy was done for supposed diphtheria. There were 1,239 deaths among the 6,700 cases. The mortality ranged from 10.3 to 21.4 per cent in children under ten, jumped to twice this in older children, three times as much in adults under thirty, and four times at fifty to sixty. In treatment, he emphasizes the necessity for personal supervision and extremely careful nursing of the patient even during the stage of repair. The spread of the disease along the routes of traffic is shown by the maps. The fact that the poliomyelitis virus can continue to live in the rabbit organism suggests that it may be transmitted by animals besides direct contact from man.

---

Councilor districts should inform the public of our efforts to serve their medical necessities. That will protect eligible, patriotic physicians who on the advice of their committee, do not apply for a commission in the Medical Reserve Corps.

THE NEBRASKA STATE MEDICAL JOURNAL

Published monthly by The Nebraska State Medical Association.

J. M. Aikin, Managing Editor..........Omaha
A. F. Tyler, Associate Editor..........Omaha

Journal and Publication Committee.
F. A. Long, Chairman..........Madison
W. O. Bridges..........Omaha
B. F. Bailey..........Lincoln
J. M. Aikin, Ex-Officio..........Omaha

Subscription $2.00 Per Year. Single Copies 20c Each

All communications should be addressed to
The Nebraska State Medical Journal,
476 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. III. July, 1918. No. 7

## The American Medical Association Meeting.

The House of Delegates held two sessions Monday, one Tuesday forenoon and one on Thursday morning. One hundred and seventeen delegates were present and joined in the Thursday morning session. Chairman, Dr. Hubert Work of Pueblo, Colorado, presided. His promptness in convening the house at the appointed hour, courteous manner and impartial rulings won universal favor with all present, and facilitated business transactions. In an assembly of men chosen as representatives of the medical profession coming from nearly every state, and some of our dependencies, supplemented by medical officers from England, France, Belgium, Italy and Canada, our 1918 House of Delegates was a most creditable representation of the medical profession of the civilized world. Numerically the House represents the largest medical organization in the world. In sanitation, efficient service and clinical instruction our American physicians are leaders. Dr. Hubert Work was unanimously chosen to succeed himself as president of the House.

The scientific sections were well attended. Our foreign guests enlightened and instructed appreciative audiences by joining in discussions on the floor, and on the platform speaking to large assemblies on medical war problems and patriotism. During all the meetings in every department of the Association the controlling spirit was unanimity in action and efficiency in service, where ever our government calls us to work.

The presidential address by Arthur Dean Bevan, M. D., Chicago, dealt with basic truths clearly and fearlessly stated. He tersely expressed the imperative necessity for moral rightness as fundamental to the health and material prosperity of any nation. It is a document well worthy the perusal, study and practice of every member of our profession.

The National Association membership is more than 81,000. Our State Medical Association membership is 1082. Among our State Association membership only 380 are recorded as holding a membership in our National Association.

---

Last month we published editorially, reports by the A. M. A. Council on Pharmacy and Chemistry directing attention to the real and proprietary names of certain commonly used drugs, advising physicians to give preference to the pharmacopoeial name. We here quote from the June 8th issue of the American Medical Journal as follows:

### DOMINATION OF THE MEDICAL PROFESSION BY COMMERCIAL INTERESTS.

Last week The Journal published a letter received by a physician in Milwaukee from a firm of lawyers representing the Farbwerke-Hoeschst Company. In this communication the physician was threatened with suit if he published further unfavorable reports regarding that firm's preparation. Quoting from the attorney's letter:

"Mr. Metz directs us to inform you that the publication of this article and the statements therein were seriously damaging to the Farbwerke-Hoechst Company, and directs us to say further to you that he and the corporation will hold you personally responsible for any repetition, oral or written, of the same or of similar statements to the same effect."

We were under the impression that the time had passed when a proprietary medicine manufacturer would presume to threaten a physician for making an honest report of his results with any therapeutic agent. Such condition did exist once, before the Council on Pharmacy and Chemistry undertook its work. Now comes Mr. Metz to revive this relic of an historic but infamous period in the history of American proprietary medicine manufacturing. Even Vanderbilt regretted that he ever said "The public be d——." One of the elementary principles in the practice of medicine is that the individual physician shall let others know his results, whether good or bad, in any line of treatment. It is by such interchange of knowledge and experience that progress in medicine is possible. Yet Mr. Metz would interfere with the diffusion of such knowledge and experience when it applies to proprietary medicines. His legal threat against Dr. Sargent is "terrorism" applied to the medical profession.

### Medical Reserve Plan.

In consequence of a decided misapprehension, which seems to be prevalent among the members of the profession in the state relative to the councilor-district plan of designating medical men for the Medical Reserve Corps of the Army, the following statement is published. The plan referred to is simply this:

The councilor of each district, and one member of each county society in the district, will constitute a board for the selection of the members of the profession in such district, who shall report for examination for the Medical Reserve Corps. The number to be selected will be in accordance with the number required to fill the quota of the district. Those selected in this way will be designated for examination, and their names will be sent by the councilor of the district to Colonel J. M. Banister, U. S. Army, chairman of the State War Board. The necessary instructions will be given them by Colonel Banister, blanks sent to them, and a date appointed for the examination of each. No one in the district will be examined except those specifically designated by the board having jurisdiction in each case.

This provision will have no bearing upon members of the profession, who may desire to volunteer and enter the service directly. Such physicians can always have an opportunity to enter the service as heretofore.

Col. J. M. Banister, Chairman.
Dr. Jno. E. Summers
Dr. Ewing Brown
Dr. Chas. L. Mullins
Dr. Joseph M. Aikin
War Committee of the Neb. State Med. Assn.

To Our Councilors:

You are asked to send the names of all physicians in your district who have expressed their willingness to enter the Medical Reserve Corps of the Army or Navy to your State War Committee. These names will be published in our Journal from month to month as reported. The number needed to fill your quota will be furnished to you later.

Col. John M. Banister, Chairman.
Joseph M. Aikin, Secretary.

### Service vs. Selfishness.

The Journal has received numerous inquiries from men of local prominence asking that their doctor be exempt from government service because he has a large business and the community in which he resides need his professional service.

Our government is asking for our best doctors. They have our choice sons fighting and dying for our cherished ideals and want the best medical skill we have to care for them. When in the trenches on the battle field or in the hospitals, they need our medical service. We who remain in our community homes, ministered to by loving friends, can well accept a slight inconvenience that our boys away from home in the trenches, out of doors or where ever they may be on land or sea, surrounded by malicious and barberous enemies, have the best medical and surgical skill our country can furnish.

The war committee of our State Medical Association in accord with a like committee in our American Medical Association have divided Nebraska into twelve geographical divisions known as "Councilor Districts." Each district is under the direct supervision of a committee composed of one doctor chosen by each county society with the councilor of that district as their chairman. These committees have jurisdiction in their several districts to determine the needs of their locality and decide who can and should serve our government, and who should remain at home and attend to the civil, industrial, and educational necessities of the respective communities.

Recommendations by this committee through our State and National war committees will be respected when filling Nebraska's quota of doctors asked for by our government.

## Our Advertising Patrons.

The Journal asks its readers to carefully examine our advertising pages. Observe the varieties of goods there offered for sale. Compare the firms we advertise with those with whom you deal who sell the same class of goods. Our advertising patrons expect and are entitled to our patronage. They pay for advertising space because they believe in us. Their goods are offered in competition with others selling the same kind of products. Why not make our selections and purchases from our advertising patrons, in so far as they have the goods we need. Every advertiser we carry will give you a square deal.

See our new advertisers in this issue. We think it a compliment to our Journal that in the slack season of the year some large advertisers are giving us contracts.

## STATE NOTES.

Dr. Newell Jones of Omaha spent a few days in Minneapolis recently.

Dr. W. L. Shearer recently spent a week in Minneapolis and Minong, Wis.

Dr. H. B. Lemere of Omaha has been called to the service and is located at Camp Meade, Annapolis Junction, Md.

Dr. H. E. Burdick of David City has been appointed Secretary of the Section of Surgery of the Nebraska State Medical Association for the ensuing year.

Dr. Thomas Long and family of Ashford, Washington, visited his brother F. A. Long of Madison and other relatives and friends in Nebraska during the month of June.

Dr. C. H. Newell, formerly associated with Dr. A. P. Condon at the Nicholas Senn Hospital has moved to the Lister Hospital since Major E. C. Henry was called to the service.

Dr. Wm. J. Douglas, who has been practicing at Atkinson for a considerable length of time, has entered the army service. His present address is Camp Travis, Fort Sam Houston, Texas.

Dr. F. H. Kuegle of the Nicholas Senn Hospital recently sustained an infection of the right index finger necessitating an amputation. The doctor is just now recovering from the effects of this severe infection.

The members of the Omaha Roentgen Ray Socety gave a dinner at the University Club, Omaha, recently in honor of Major E. A. Merritt, formerly of Council Bluffs, Iowa, at present stationed in the Surgeon General's office, Washington, D. C.

Captain Normal C. Prince of Omaha writes very interesting letters regarding his experience in the service. He recently completed three months training at Fort Riley, Kansas, and is now stationed at Allenstown, Pa., waiting for sailing orders. The captain is with the Mobile Operating Unit, which is an automobile unit designed to see service between the different evacuation hospitals at the point of greatest need. All of the men in this unit are Johns Hopkins men except five, of which Captain Prince is one.

The following Nebraska Physicians were registered at the meeting of the American Medical Association up to the evening of the third day:

### June 11.

Joseph W. Aikin, Omaha; Edward P. Bachle, Liberty; Chester D. Barnes, Tecumseh; George A. Birdsall, Alexandria; Charles H. Breuer, Lincoln; E. L. Brush, Norfolk; Floyd Clarke, Omaha; William O. Colburn, Lincoln; W. L. Curtis, Fairbury; Irving S. Cutter, Omaha; Porter F. Dodson, Wilber; J. R. Dwyer, Omaha; Clifford P. Fall, Beatrice; George W. Fergers, Nebraska City; Frederick Fouts, Central City; R. W. Fouts, Dawson; Charles C. Gafford, Nermose; William P. Haney, Omaha; O. T. Hansen, Wausa; Edward R. Hays, Falls City; John W. Hellwig, Omaha; J. M. F. Heyman, Omaha; C. L. Hustead, Falls City; A. F. Jonas, Omaha; C. R. Kennedy, Omaha; Fred A. Lemar, Humphrey; Delia A. Lynch, Omaha; C. H. Maxwell, Dakota City; John I. McGirr, Beatrice; W. F. Mitchell, Superior; John B. Potts, Omaha; E. W. Powell, Omaha; Howard W. Quirk, Crete; R. G. Rich, David City; Bryan M. Riley, Omaha; Adolph Sachs, Omaha; George F. Simanek, Omaha; Frank G. Snyder, York; Willis H. Taylor, Omaha; Warren Y. Thompson, Omaha; J. M. Willis, Arapahoe; W. R. Young, Ansley.

### June 12.

August N. Anderson, Lincoln; E. J. Angle, Lincoln; Harvey H. Bellwood, Alliance; Harry W. Benson, Oakland; L. W. Bowman, Alliance; Allan J. Cameron, Herman; Roy Crook, Fort Omaha; Rudolph Decker, Bryon; Joshua S. Devries, Fremont; Joseph B. Disker, Lawrence; C. L. Egbert, Hastings; Francis Elias, Wymore; E. F. Fuqua, Benkelman; Geo. Haslam, Fremont; Frederick W. Lake, Omaha; O. E. Liston, Elmwood; John Prentiss Lord, Omaha; W. D. Mackenzie, Indianola; H. M. McClanahan, Omaha; Robert McConaughy, York; Charles McMartin, Omaha; A. R. Mitchell, Lincoln; I. C. Munger, Lincoln; L. L. Nelson, Norfolk; D. D. T. Quigley, Omaha; John D. Reid, Pilger; John W. Straight, Hastings; Lester K. Strate, Hastings; J. Lue Sutherland, Grand Island; Frederick F. Teal, Lincoln.

### June 13.

Edwin B. Bradley, Spencer; A. D. Dunn, Omaha; Andrew J. Edstrom, Omaha; H. Gifford, Omaha; George Hoffmeister, Imperial; Albert Lynch, Fairbury; A. I. MacKinnon, Lincoln; Z. E. Matheny, Bellwood; R. J. Murdoch, Blair; Lawrence B. Pilsbury, Lincoln; John H. Reagan, Grand Island; Charles O'N. Rich, Omaha; Wm. L. Shearer, Omaha; Samuel A. Swenson, Oakland; C. C. Tomlinson, Omaha; Fred W. Webster, Lincoln; Henry P. Wekesser, Lincoln.

### June 14.

L. B. Bushman, Omaha; W. H. Loechner, Omaha.

## NECROLOGY.

Dr. Chas. C. Allison of Omaha passed away on June 19, 1918. His death removes from the medical profession of the state one of its foremost figures. He was born in Kansas in 1865, was educated at St. Mary's College, St. Mary, Kansas, after which he was a student in medicine at Louisville Medical College, Louisville, Kentucky, graduating in 1888. After graduation he served a term as ship's surgeon coming to Omaha in 1891. For a time he was associated in the practice of surgery with Dr. John E. Summers, later opening an office of his own and continuing in the practice of surgery until his death. As a surgeon there were none more skillful than he. As a man he was amiable in disposition and counted his friends by the thousands. As a physician he was ever ready to minister to the wants of the physically ill and gave much of his time and means to charitable service. He held the position of the Professor of Principles and Practice of Surgery and Clinical Surgery at Creighton Medical College for many years. Hundreds of graduates of this institution look back with great pleasure to receiving instruction under him and they mourn his loss. His place cannot be filled and as time passes by they will feel his loss more keenly. We extend to the family our sincere sympathy in their bereavement.

DR. CHAS. C. ALLISON.

Dr. C. C. Sackett, of Laurel, a member of a posse pursuing a band of robbers, was shot through the abdomen June 13th and died in a Sioux City hospital the following night. Dr. Sackett had practiced his profession at Laurel for several decades, and was a well known physician in the northeastern part of the state.

Don Leroy Talcott, Crofton, Neb.; Iowa City, Ia., 1904; age 40; member of the Nebraska State Medical Association, died May 26, 1918, of pneumonia. He was an honorable member of his profession and had never practiced in any other locality, was well known in northeastern Nebraska, public spirited and chairman of the Red Cross Drive, Knox county.

## Orders to Officers of Medical Reserve Corps For June.

To Austin, Tex., Texas State University, for duty, from Wahoo, Lieut. Charles L. Housel, Ansley.

To Camp A. A. Humphreys, Accotink, Va., for duty from Army Medical School, Capt. Oscar F. Lang, Falls City.

To Camp Travis, Fort Sam Houston, Tex., base hospital, from Fort Riley, Lieut. Lloyd H. Fochtman, Cozad.

To Chicago, Ill., Northwestern University School of Medicine, for instruction and on completion to his proper station, from Fort Omaha, Capt. Roy Crook, Winnetoon; from Jefferson Barracks, Lieuts. J. Irvin Limburg, Walthill; John L. Linn, Wahoo.

To Fort Des Moines, Ia., base hospital, from Fort Riley, Capt. Homer Davis, Genoa.

To Manila, Philippine Islands, Philippine Department, for duty, from Camp Dodge, Lieuts. Clarence E. Smart, Alliance; Charles P. Charlton, Palmyra; Raymond B. McNamara, Wynet.

To Camp Crane, Allentown, Pa., for duty, from Ft. Riley, Capt. Norman C. Prince, Omaha.

To Camp Dix, Wrightstown, N. J., for duty, Lieut. Perry D. Kelly, Nemaha.

To Camp Hancock, Augusta, Ga., for duty, Lieut. Edgar A. Pickens, Benkelman.

To Camp Pike, Little Rock, Ark., for duty, Lieut. William R. Peters, Stanton.

To Camp Travis, Fort Sam Houston, Tex., for duty, Lieut. John L. Sears, North Loup.

To Camp Zachary Taylor, Louisville, Ky., with the board examining the command for nervous and mental diseases, Capt. Samuel J. Stewart, Hastings; from Ann Arbor, Lieuts. Ward W. Hedlund, Ingleside; Andrew J. Smith, Salem.

To Chicago, Ill., Presbyterian Hospital, for instruction, and on completion to his proper station, from Camp Dodge, Lieut. Charles F. Shook, Omaha.

To Hoboken, N. J., for duty, Major Alfred J. Brown, Omaha; Capt. Cecil C. Copeland, Beaver City, Lieut. William L. Sucha, Hastings.

To Pittsburgh, Pa., Carnegie Bldg., for instruction and on completion to Camp Meade, Annapolis Junction, Md., base hospital, Lieut. George F. Farman, Lincoln. On completion to his proper station, from Camp Beauregard, Lieut. Roy E. Hall, Fullerton.

To Camp Meade, Annapolis Junction, Md., base hospital, Capt. Henry B. Lomere, Omaha.

To Camp Dodge, Des Moines, Iowa, as orthopedic surgeon, from Fort Riley, Capt. Homer Davis, Genoa.

To Camp Sherman, Chillicothe, Ohio, base hospital, from Camp Grant, Capt. John Buis, Pender.

To Camp Travis, Fort Sam Houston, Texas, for duty, Capt. William J. Douglas, Atkinson; Lieut. Louis N. Smernoff, Omaha.

To Douglas, Ariz., for duty, from Fort Riley, Lieut. Thomas Lahners, Belvidere.

To Fort D. A. Russell, Wyo., for duty, Lieut. Oscar P. Schnetazy, Schuyler.

To Fort Des Moines, Iowa, base hospital, from Fort Riley, Major John P. Lord, Omaha.

To Fort Slocum, N. Y., for duty, from Army Medical School, Lieut. Guy S. Philbrick, Omaha.

To Hoboken, N. J., base hospital, from Camp Shelby, Capt. John C. Moore, Omaha.

To Portland, Ore., Yeon Building, for duty, from Fairfield, Ohio, Lieut. Frank W. Scott, Lodge Pole; from Fort Omaha, Lieut. William E. Mogan, Petersburg.

Honorably discharged, Capt. Harry M. Bonniwell, Lincoln.

## GENERAL NOTES.

The response from our councilors on the plan for securing volunteers in the M. R. C. is prompt and very encouraging. We have never doubted the loyalty of physicians in answering the call to service for relief to suffering humanity. Reports already in the Journal office show that in some councilor districts almost the entire territory has been canvassed. One councilor reports that eleven out of twelve counties in his district have endorsed the plan. Elsewhere in this issue we print our M. R. C. Honor Roll to July 1st, 1918, inclusive.

Dr. Alexander Lambert of New York, Medical Director of the American Red Cross in France, was elected president of the American Medical Association in one of the closest elections in the history of the organization.

By a vote of 60 to 57 cast in the association's "house of delegates" Dr. Lambert won the coveted position over Rear Admiral William C. Braisted, chief surgeon of the United States navy. Dr. Lambert was placed in nomination by Dr. F. N. Crandall of New York. Admiral Braisted was named by Dr. L. S. McMurtry of Louisville, Ky.

Dr. Lambert will not assume office until the annual convention next year. At that time he will succeed Dr. Arthur Dean Bevan of Chicago, the present president.

Others elected were:

Secretary—Dr. A. R. Craig, Chicago.

Treasurer—Dr. W. A. Pusey, Chicago.

Chairman House Delegates—Maj. Hubert Work, Colorado.

Vice Chairman—Dwight L. Murray, New York.

Trustees—Dr. Frank Billings, Chicago; Wendell C. Phillips, New York; Thomas McDavitt, St. Paul; Dr. D. Chester Brown, Danbury, Conn. (Dr. M. L. Harris, trustee for fifteen years, withdrew, and asked that Dr. Billings be nominated in his place).

First Vice President—Dr. W. N. Wishart, Indianapolis.

Second Vice President—Dr. David Starr Judd, Rochester, Minn.

Third Vice President—Dr. C. W. Richardson, Washington, D. C.

Fourth Vice President—Dr. John M. Baldy, Philadelphia.

Chairman Judicial Council—Dr. M. L. Harris.

Chairman Council on Health and Public Institutions—Dr. Ludwig Hektoen, Chicago.

Members Council on Health and Public Institutions—Drs. W. S. Rankin, North Carolina; William S. Thayer of Johns Hopkins University, Baltimore.

Chairman Council on Medical Education—Dr. Horace D. Arnold, Massachusetts.

Member Council on Scientific Assembly—Dr. Roger S. Morris, Cincinnati.

The convention voted to hold the next meeting in Atlantic City, the time to be determined at a later gathering of the trustees.

### Mortality Rate U. S. Army.

"We expect to put back 75 or 80 per cent of the wounded into the trenches, that the permanent disabilities will amount to not more than 10 per cent for the period of the war. Then our army death rate is very low. The best record previously was the Japanese army which was twenty per thousand. Ours is only eight per thousand."

## Pernicious Anaemia Complicating Pregnancy.*

Palmer Findley, M. D., Omaha.

Findley reports a case of pernicious anaemia complicating pregnancy and raises the question as to whether or not pregnancy should be interrupted in the early phase of pernicious anaemia.

A review of the literature leads very directly to the conclusion that pregnancy and the puerperium favor the development and hasten the course of pernicious anaemia. That while pernicious anaemia is not a disease peculiar to pregnancy it is nevertheless true that the disease occurs with unusual frequency in the course of pregnancy and the puerperium. Just what the predisposing factors are in pregnancy is not known. Prolonged lactation, frequent childbearing, the toxaemias of pregnancy and unfavorable hygienic surroundings are factors to be reckoned with but are not conclusive. Neither post-partum hemorrhages nor puerperal infection tend to develop pernicious anaemia if we are to judge from case records. It is of interest to note that with few exceptions pernicious anaemia rarely develops in primipara and is more frequently observed in a pregnancy which has been preceded by the birth of several children in rapid succession.

In reviewing the reports of cases, one is struck with the frequency with which it is recorded that the patient was seemingly in perfect health until early in the second semester. As a rule she had born several children without mishap, that there were no evidences of ill health until the sixth or seventh month of gestation when there was observed a rapidly increasing palor, associated with digestive disturbances, hemorrhages from the nose, stomach or bowel, rapidly failing strength, dyspnoea, vertigo, headaches, disturbed vision, palpitation of the heart an eventually oedema of the lower extremities, loss of reflexes, ataxia, rapid pulse rate and the development of a low grade of temperature.

---

*Read before the American Gynecological Society in Philadelphia, May 17, 1918.

Such are the clinical and anatomical findings in typical cases but there is a time in the development of the disease when a positive diagnosis cannot be made. This may be called the incipient stage of pernicious anaemia, a time in the course of the disease when an existing pregnancy may hasten the development of a hopeless condition which without the influence of pregnancy might have been averted. This brings up the question as to whether pernicious anaemia is ever curable.

In every frank case of pernicious anaema complicating pregnancy the maternal mortality is 100 percent, although in exceptional cases death may be deferred for a period of weeks, months or even a year or more following childbirth.

The management of these cases may be said to be in the interest of the mother in the early stages of the disease and of the child in the late stages of the disease. Where the disease is well advanced, the child living and approaching the period of viability pregnancy should be allowed to proceed to term if possible in the hope of delivering a healthy child. The case of the mother is hopeless and no good could come from sacrificing the child by the interruption of pregnancy.

If the interruption of pregnancy is to accomplish any lasting good the pregnancy should be terminated in the incipient stage of the disease. It is only in such cases that I can see any justification for the sacrifice of the child.

## COUNTY SOCIETY NOTES.

### Semi-Annual Meeting of Cedar, Dixon, Dakota, Thurston and Wayne Counties Medical Society.

Masonic Hall, Emerson, Neb., 8 p. m., June 19, 1918.

PROGRAM

W. R. Talboy, Newcastle. "Entero-Colitis Diagnosis. Differential Diagnosis and Treatment." Discussion opened by C. L. Phillips, Dixon.

W. D. Runyan, Sioux City, Iowa. "Differentiation of Pulmonary Abscesses from Empyema, and Treatment." Discussion opened by C. L. Maxwell, Dakota City.

J. C. Hay, Laurel. "Breech Presentation Diagnosis and Methods of Treatment." Discussion opened by L. J. Fleetwood, Wakefield.

G. W. Kock, Sioux City, Iowa. "Anemias Primary and Secondary and Treatment." Discussion opened by C. C. Tellesen, Ponca.

Luncheon will be served after the program.

SOCIETY OFFICIALS.

N. L. Hanson, Emerson, President.
R. C. Richards, Newcastle, Vice President.
F. G. Dewey, Coleridge, Secretary-Treasurer.

CENSORS.

E. B. Erskine, M. R. C., Wayne.
C. H. Maxwell, Dakota City.
C. L. Phillips, Dixon.

## Book Reviews.

**Typhoid Fever, Considered as a Problem of Scientific Medicine** by Frederick P. Gay, Professor of Pathology in the University of California. The MacMillan Company, New York, 1918. Price $2.50.

Any book written by Gay always attracts the attention of the student of medicine. To anyone interested in the typhoid fever problem this book cannot be too highly recommended. The author has succeeded in correlating the clinical and laboratory manifestations in a clear, concise manner. The description of the modern development of the bacteriology and immuniology of typhoid fever is especially complete. The most recent diagnostic tests are clearly explained. Statistics showing the various methods of vaccination used by different armies are given and conclusions deduced. The treatment is discussed in detail and includes description of vaccine and serum reactions. A very interesting chapter is appended suggesting future lines of research. The book is alike of value to the student in medicine, the research worker, and the general practitioner.

E. T. M.

**A Practical Treatise on Fractures and Dislocations** by Lewis A. Stimson, B. A., M. D., LL.D. (Yale), Professor of Surgery in Cornell University Medical College, New York; Consulting Surgeon to New York and Bellevue Hospitals; Corresponding Member of the Societe De Chirurgie of Paris. Eighth edition with 475 illustrations and 39 plates in monotint. Lea & Febiger, New York and Philadelphia, 1917. Price $5.00.

In this eighth edition of his work, the author has kept his book up to date to the time of his death. It is unquestionably the most complete work on the subject in English as the author throughout his long career had at his disposal the largest accident clinic in the country, the Hudson Street hospital. This he made the most of, ever keeping his eye on the masters of the past. His collection and arrangement of statistics is unrivaled making this the most authoritative work on the subject in the way of statistics. As a book for beginners it is not the equal of Scudder on Fractures in which the emphasis is put on how to carry out the treatment. Stimson's book however should be in the library of every one who is treating fractures and dislocations.

R. R. H.

Medical Service at the Front, McCombe & Menzies. Lea and Febiger, Philadelphia and New York, 1918.

This is a very attractive manual of one hundred and twenty-eight pages containing a concise and lucid description of medical service on the field. A few headings will give the general scope of the book. "A Division in the Front Line," "The Regimental Medical Officer," "The Field Ambulance," "The Corps," "The Casualty Clearing Station," sanitary regulations and first aid treatment are fully described. The book gives the clearest conception of the care of the men in the field that I have seen. The text is profusely illustrated.

A. B. S.

Syphilis and Public Health by Edward B. Vedder, a man who has had a large clinical as well as a laboratory experience in this matter. The book contains 300 pages. It is concise and up-to-date. The statistics are interesting, and, while they are a surprise to some of us, his theory of lessening the disease by educating the public, will take a long time to do and according to his statistics the disease is not all with the lower classes, but much can be done with the common people by teaching them how the disease is contracted by using utensils that other people have used.

His remarks on Diagnosis and Methods used are very good. Also his treatment and the methods he uses to determine when the patients are cured are very good, so much better than most of us have been using. The book has much to commend itself to every physician as well as men interested in public health.

E. J. U.

Physical **Diagnosis** by W. D. Rose, M. D. Lecturer on Physical Diagnosis and Associate Professor of Medicine in the Medical Department of the University of Arkansas. 294 illustrations. St. Louis: C. V. Mosby Company, 1917. Price $4.00 net.

This little book from the press of C. V. Mosby Co., 1917, perhaps meets the aim of its author, who states that he has in mind the medical student and the busy practitioner, but there is really nothing new presented.

He uses the topographical regions of the thorax and divides the chest in such a way that the student has to remember twenty-seven different lines and regions, which always seems a mistake from the standpoint of teaching, as it is much more practical to locate any point on the chest according to bony landmarks.

Part II of his book is on general examination of the abdomen, and contains many valuable points, which are not usually shown in texts on physical diagnosis.

## HONOR ROLL.

### Adams County

HASTINGS—Eugene Clair Foote; Lester Kenneth Strate. INGLESIDE—Ward Willard Hedlund; Harry Jay Pittock. PAULINE—Charles Nicholas Meriwether.

HASTINGS—Samuel James Stewart.

### Antelope County.

NELIGH—Stanley Curtis Clements; Ben Samuel Harrison. OAKDALE—George William Earle.

### Blaine County

CRETE—Francis Joseph Stejskal.

### Boone County

ALBION—Herbert Peter Walker; Finley Joseph McRae. CEDAR RAPIDS—Frank Dooley Burgess. PETERSBURG—William Edward Mogan. ST. EDWARDS—Thomas Jefferson Jones.

### Boyd County

BUTTE—John Ray Beatty. LYNCH—Guy Bentley Ira.

### Brown County

AINSWORTH—Oscar Edwin Coleman; Tyre Kinser Jones. JOHNSTOWN—Charles Edward Remy. LONG PINE—Arthur Jacob Griot; Sam Hardeman; James C. Tucker

### Buffalo County

ELM CREEK—Charles Albert Yoder. KEARNEY—Delbert L. Hibberd; Wallace Edson Rose; Judd A. Strong.

### Burt County

CRAIG—Alfred Edward Westervelt. LYONS—Frank Dell Ryder. OAKLAND—Samuel August Swenson. TEKAMAH—Henry Albert Johnson; Merritt Wood.

### Butler County

DAVID CITY—Charles Edward Palmer.

### Cass County

GREENWOOD—Harry Webber McFadden. WEEPING WATER—James Walter Thomas.

### Cedar County

COLERIDGE—Fredk. E. Braucht. HARTINGTON—Lucien Stark; Edw. Martin Thies. RANDOLPH—Bert Fuller Gleason.

### Chase County

CHAMPION—Charles Edwin Legg.

### Cherry County

CODY—William Roy Cornelius.

### Cheyenne County

LODGE POLE—Frank Waldo Scott. SIDNEY—Riley Edward Roche.

### Clay County

EDGAR—Robert Turney Jones. FAIRFIELD—Geo. Henry Bentz.

### Colfax County

SCHUYLER—Ralph S. Hart; Jesse Carl Painter; Oscar Paul Schnctzky.

### Cuming County

BANCROFT—Harry Whiting Francis. WEST POINT—Harry Lee Wells.

### Custer County

ANSELMO—Claude Leroy Wills. ANSLEY—Ralph Philip Higgins; Charles Lawson Housel. BROKEN BOW—Willis Edward Talbot. CALLAWAY—Roy Douglas Bryson. OCONTO—John Christopher Wade.

### Dakota County

HOMER—Daniel Brooks Stidworthy.

### Dawson County

COZAD—Lloyd Henry Fochtman. EDDYVILLE—James Bernard Kile. FARNAM—Alfred E. Reeves. OVERTON—Charles B. Edwards.

### Dixon County

PONCA—John M. Davey; Glyndon Angus Young.

### Dodge County

FREMONT—George James Haslam. HOOPER—Clinton Daniel Heine. NORTH BEND—William Elden Doane; Paul Regan Howard.

### Madison County

MADISON—Arthur Emile Gadbois; Edward Olinger Wilson. NEWMAN GROVE—Frank Lee Frink; Carl Augustus Meyer. NORFOLK—Augustus Charles Barry; Harry R. Carson; Warren Martin Phillips; Peter Harold Salter; Arthur Marinus Sonneland.

### Merrick County

CLARKS—Ralph Conklin Christie; Lowell Little.

### Morrill County

BAYARD—Grover Cleveland Rice.

### Nance County

BELGRADE—Onley Alphonso Brittell. FULLERTON—Roy Ellsworth Hall. GENOA—Homer Davis; Henry Eugene King; Creighton David Williams.

### Nemaha County

AUBURN—Edgar Cline; Ira Hugh Dillon. PERU—William D. Jack; Bartlett Lockwood Shellhorn.

### Nuckolls County

BOSTWICK—William James Pinkerton.

### Otoe County

NEBRASKA CITY—William Edmonds; Martin Luther Koser. PALMYRA—Chas. Percy Charlton.

### Pawnee County

PAWNEE CITY—Earl Brisbin Brooks; James Clyde Waddell. STEINAUER—Walter Lawrence Johnson. TABLE ROCK—Miles John Breuer; Leo Dow Harman.

### Pierce County

OSMOND—Ellis Herbert Whitehead. PIERCE—William Sidney Dinsmore.

### Platte County

COLUMBUS—Charles H. Campbell; Carroll Dandola Evans, Jr.; James North Evans; William Samuel Evans; Theodore Henry Koefoot; Frank Henry Marrow; William Richard Carl Neumarker.

### Red Willow County

DANBURY—McDonald Ryan; Griffith Alonzo De May. McCOOK—Roland Ray Reed.

### Richardson County

BARADA—Jesse Franklin Strong. DAWSON—James Francis Kelly. FALLS CITY—Sam David Cowan; Oscar Fredk. Lang; Henry Rufus Miner. SALEM—Andrew Jackson Smith.

### Rock County

NEWPORT—Clinton Quincy Dodd.

### Saline County

DORCHESTER—Robert Carpenter Panter. WILBER—Louis John Storkan.

### Sarpy County

GRETNA—Charles Edward Pinckney. PAPILLION—Wesley C. Becker; Oswald H. Margaret. SPRINGFIELD—John Arthur Peters.

### Saunders County

WAHOO—Charles Willard Way.

### Scottsbluff County

SCOTTSBLUFF—Joseph Benson Schrock.

### Seward County

MILFORD—James G. Muir. SEWARD—Edward M. Bernecker.

### Sheridan County

RUSHVILLE—William Henry Crawford.

### Sherman County

LOUP CITY—Otto Earle Longacre.

### Sioux County

HARRISON—Frank M. Barns.

### Thayer County

BELVIDERE—Walter Edwin Kelly; Thomas Lahners, Jr. HEBRON—Joseph Harold Boyes.

### Thurston County

PENDER—John Buis. ROSALIE—J. Jay McCarl. WALTHILL—Irwin Limburg.

### Washington County

ARLINGTON—George Frederick Hawes. BLAIR—Louis Lancelot Burstein.

### Wayne County

CARROLL—William Henry Phillips. WAYNE—Earl B. Erskine. WINSIDE—Victor Lamont Siman.

### Webster County

BLUE HILL—Philip Henry Bartholomew; Claude Ross Laird. COWLES—William E. M. Devers.

### Woodbury County

SHICKLEY—Laird W. Elwood.

---

## List of Officers Commissioned From Nebraska, In the Medical Officers' Reserve Corps

### Previous to August 8, 1917

| | | |
|---|---|---|
| Oscar Edwin Coleman | Ainsworth | 1st Lieut. |
| Herbert Peter Walker | Albion | 1st Lieut. |
| George Asa Birdsall | Alexandria | 1st Lieut. |
| Willard Samuel Howard | Alliance | 1st Lieut. |
| William Clarence Bartlett | Alma | 1st Lieut. |
| George Frederick Hawes | Arlington | 1st Lieut. |
| William James Douglas | Atkinson | Captain |
| Edgar Cline | Auburn | 1st Lieut. |
| Ira Hugh Dillon | Auburn | Captain |
| Charles Delano Hustead | Aurora | 1st Lieut. |
| Donald Benjamin Steenberg | Aurora | 1st Lieut. |
| James Madison Woodard | Aurora | 1st Lieut. |
| Francis Allen Wells | Axtell | 1st Lieut. |
| Harry Whiting Francis | Bancroft | Captain |
| Jesse Franklin Stong | Barada | 1st Lieut. |
| Warren Martin Phillips | Bartley | 1st Lieut. |
| Clay Alphonso Britell | Belgrade | 1st Lieut. |
| Harry Eugene King | Belgrade | 1st Lieut. |
| Louis Lancelot Burstein | Blair | 1st Lieut. |
| Willis Edward Talbot | Broken Bow | Captain |
| Earl Metheny | Cairo | 1st Lieut. |
| Roy Douglas Bryson | Callaway | 1st Lieut. |
| William Henry Phillips | Carroll | 1st. Lieut. |
| Charles Edwin Legg | Champion | 1st Lieut. |

| | | |
|---|---|---|
| Ralph Conklin Christie | Clarks | 1st Lieut. |
| Lowell Littie | Clarks | 1st Lieut. |
| Charles Harvey Campbell | Columbus | Captain |
| Carroll Dandola Evans, Jr. | Columbus | 1st Lieut. |
| William Samuel Evans | Columbus | Captain |
| Theodore Henry Koefoot | Columbus | 1st Lieut. |
| Frank Henry Morrow | Columbus | 1st Lieut. |
| Wm. Richard Carl Neumarker | Columbus | Captain |
| Lloyd Henry Fochtman | Cozad | 1st Lieut. |
| Alfred Edward Westervelt | Craig | 1st Lieut. |
| Irvin Clarence Munger | Cozad | 1st Lieut. |
| Czar Clinton Johnson | Creighton | 1st Lieut. |
| Hans Christian Pedersen | Dannebrog | 1st Lieut. |
| Roy W. Foutz | Dawson | 1st Lieut. |
| James Francis Keyly | Dawson | 1st Lieut. |
| James Bernard Kile | Eddyville | 1st Lieut. |
| Robert Turner Jones | Edgar | 1st Lieut. |
| Charles Albert Yoder | Elm Creek | 1st Lieut. |
| Karl Frederick Ernest Wegener | Exeter | 1st Lieut. |
| Hayes Hunter Culbertson | Fairbury | 1st Lieut. |
| Martin Henry Deffenbaugh | Fairmont | 1st Lieut. |
| William Ransom Boyer | Pawnee City | 1st Lieut. |
| William Oldman Akers | Florence | 1st Lieut. |
| George James Haslam | Fremont | 1st Lieut. |
| Hermon Aaron Gerbig | Friend | 1st Lieut. |
| Paul H. Ellis, Fort Omaha | Omaha | 1st Lieut. |
| Roy Ellsworth Hall | Fullerton | 1st Lieut. |
| Homer Davis | Genoa | Captain |
| Creighton David Williams | Genoa | 1st Lieut. |
| Carl Goehring | Grand Island | 1st Lieut. |
| Earle George Johnson | Grand Island | 1st Lieut. |
| Benj. Robert McGrath | Grand Island | 1st Lieut. |
| William Jay Redfield | Grand Island | 1st Lieut. |
| Phillip Marshall Dale | Greenwood | Captain |
| Charles Edward Pinckney | Gretna | 1st Lieut. |
| Frank Milan Barns | Harrison | 1st Lieut. |
| Lucien Stark | Hartington | 1st Lieut. |
| Joseph Harold Boyes | Hebron | 1st Lieut. |
| Stanley Curtis Clements | Neligh | Captain |
| Carl William Morrow | Hendley | 1st Lieut. |
| Fordyce H. McCabe | Holbrook | Captain |
| Daniel Brooks Stidworthy | Homer | Captain |
| Wallace Edson Rose | Kearney | 1st Lieut. |
| Lester Miles Stearns | Kearney | 1st Lieut. |
| Charles Daniel Eby | Leigh | 1st Lieut. |
| Cornelius Breckenridge Boyle | Libby | 1st Lieut. |
| George Malcolm Anderson | Lincoln | 1st Lieut. |
| Charles Harrison Arnold, 2030 So. 27th | Lincoln | 1st Lieut. |
| Harry Melvin Bonniwell, 3224 O Street | Lincoln | Captain |
| John Graham Davis, c\|o C. B. & Q. R. R. | Lincoln | 1st Lieut. |
| Ira Hiram Lockwood, Green Gables | Lincoln | 1st Lieut. |
| Frederick Leon McLeod, Ganter Bldg. | Lincoln | 1st Lieut. |
| Harry Bohn Metheny, 640 N 16th St. | Lincoln | 1st Lieut. |
| Ole Olson, Box 323 | Lincoln | Captain |
| Hiram Winnett Orr, 1010 Terminal Bldg. | Lincoln | Captain |
| Edward Winfield Rowe. 514 FNB | Lincoln | 1st Lieut. |
| Paul Ambrose Royal, Green Gables | Lincoln | 1st Lieut. |
| Clark Dwight Spivey, 612 First Nat. Bank | Lincoln | 1st Lieut. |
| Arthur Bruce Walker, 1105 O St. | Lincoln | 1st Lieut. |
| Frank Waldo Scott | Lodge Pole | 1st Lieut. |
| Otto Earle Longacre | Loup City | 1st Lieut. |
| Guy Bentley Ira | Lynch | 1st Lieut. |
| Frank Dell Ryder | Lyons | 1st Lieut. |
| Sam Hardeman | Long Pine | 1st Lieut. |
| James C. Tucker | Long Pine | 1st Lieut. |
| Edward Olinger Wilson | Madison | 1st Lieut. |
| Charles Lauder Fahnestock | McCook | 1st Lieut. |
| Henry Seeley Andrews | Minden | Captain |
| William Edmonds, 717 Central Ave. | Nebraska City | 1st Lieut. |
| Martin Luther Koser | Nebraska City | 1st Lieut. |
| Uen Samuel Harrison | Neligh | 1st Lieut. |
| Carl Augustus Meyer | Newman Grove | 1st Lieut. |
| James Walter Thomas | Nehawka | 1st Lieut. |
| Harry Raymond Carson, State Hospital | Norfolk | Captain |
| Peter Harold Salter | Norfolk | Captain |
| William Elden Doane | North Bend | 1st Lieut. |
| Paul Regan Howard | North Bend | 1st Lieut. |

| | | |
|---|---|---|
| William R. May | North Bend | 1st Lieut. |
| Clifford Leon Hopper | North Platte | 1st Lieut. |
| Samuel August Swenson | Oakland | Captain |
| John Christopher Wade | Oconto | 1st Lieut. |
| Charles Curtis Dallingford, Box 74 | Ogalalla | 1st Lieut. |
| Henry Leland Akin, 604 City Nat. Bank Bldg., | Omaha | Captain |
| John Franklin Allen, 4838 So. 24th | Omaha | 1st Lieut. |
| William Nance Anderson, 891 City Nat. Bk. | Omaha | 1st Lieut. |
| William Henry Betz, 4839½ So. 24th | Omaha | Captain |
| Albert Paul Condon, Nicholas Senn Hosp. | Omaha | Captain |
| Clement Anthony Cummings, 2733 So. 9th St., | Omaha | 1st Lieut. |
| William De Lafayette Curry, 2865 Manderson, | Omaha | 1st Lieut. |
| Arthur Lewis Davis, Lord Lister Hosp. | Omaha | 1st Lieut. |
| Emile L. DeLanney, Brandeis Bldg. | Omaha | 1st Lieut. |
| Lother Frederick Egan, St. Joseph's Hosp. | Omaha | 1st Lieut. |
| Harold Everett Eggers, 42nd & Dewey | Omaha | 1st Lieut. |
| Henry M. Fitzgibbon, 492 Brandeis Bldg. | Omaha | 1st Lieut. |
| Edward Amos Van Fleet, 210 McCague Bldg. | Omaha | Captain |
| Daniel Franklin, 2411 Charles | Omaha | 1st Lieut. |
| George Richardson Gilbert, 202 Brown Block | Omaha | 1st Lieut. |
| Lynn Thompson Hall, 506 Ware Block | Omaha | 1st Lieut. |
| Louis Everett Hanisch, Immanuel Hosp. | Omaha | 1st Lieut. |
| Charles Aaron Hull, 200 Bee Bldg. | Omaha | Captain |
| John Madison Hench, 701 City Nat. Bank | Omaha | Captain |
| Edwin Clyde Henry, Brandeis Theater Bldg. | Omaha | Captain |
| Joseph Aloysius Henske, Brandeis Bldg. | Omaha | Captain |
| Aldis Adelbert Johnson, 510 So. 42nd | Omaha | 1st Lieut. |
| Philip Levey, Brandeis Theater Bldg. | Omaha | 1st Lieut. |
| Arthur Lawrence Linguist, 4838 So. 24th | Omaha | 1st Lieut. |
| John Prentiss Lord, 830 City Nat. Bk. | Omaha | 1st Lieut. |
| Edward Clarence Lynch, 1526 So. 27th | Omaha | Captain |
| William Joseph McCrann, Jr., 4839½ So. 24th, | Omaha | 1st Lieut. |
| Clarence Molseed, 1140 1st Nat. Bk. Bldg. | Omaha | 1st Lieut. |
| Cleland Granger Moore, 528 City Nat. Bk. | Omaha | 1st Lieut. |
| Reuben A. Moser, 420 Brandeis Theater | Omaha | 1st Lieut. |
| R. A. Mozer | Omaha | 1st Lieut. |
| Charles Thayer Needham, 210 Paxton Block | Omaha | 1st Lieut. |
| Robert Clayton Person, 567 Brandeis Bldg. | Omaha | 1st Lieut. |
| Alva Sherman Pinto, 1605 Dodge St. | Omaha | Captain |
| George Peyton Pratt, 307 Br. Theater Bldg. | Omaha | 1st Lieut. |
| George William Publey, 615 Brandeis The. | Omaha | Captain |
| John Earle Pulver, 610 Br. Theater Bldg. | Omaha | Captain |
| Harold Everett Rogers, 42nd & Dewey | Omaha | 1st Lieut. |
| William Lythe Ross, Jr., 736 City Nat. Bk. | Omaha | 1st Lieut. |
| Charles Francis Shook, 642 World Her. Bldg. | Omaha | 1st Lieut. |
| Joseph Marius Shramek, 1622 So. 8th | Omaha | 1st Lieut. |
| Robert E. Schrook, 830 City Nat. Bk. | Omaha | 1st Lieut. |
| Arthur Charles Stokes, Br. Theater Bldg. | Omaha | Captain |
| Charles Marion Swab, St. Joseph's Hosp. | Omaha | 1st Lieut. |
| Carl Leonard Swenson, Brandeis Bldg. | Omaha | 1st Lieut. |
| John Alex Tamisiea, World Herald Bldg. | Omaha | 1st Lieut. |
| Frederick A. Van Buren, Brandeis Theatre | Omaha | 1st Lieut. |
| Glenn D. Whitcomb, 532 Paxton Blk. | Omaha | 1st Lieut. |
| Oswald H. Margaret | Papillion | 1st Lieut. |
| Chas. Nicholas Meriwether | Pauline | 1st Lieut. |
| Earl Brisbin Brooks | Pawnee City | Captain |
| James Clyde Waddell | Pawnee City | 1st Lieut. |
| John Buis | Pender | Captain |
| William Sidney Dinsmore | Pierce | 1st Lieut. |
| Bartlett Lockwood Shellhorn | Peru | 1st Lieut. |
| Marion Theodore Sigler | Pickrell | 1st Lieut. |
| Arthur Ellsworth Cook | Randolph | 1st Lieut. |
| Robert Patton Hoxsey | Red Cloud | 1st Lieut. |
| William Henry Crawford | Rushville | 1st Lieut. |
| Frederick George Kolouch | Schuyler | 1st Lieut. |
| Jesse Carl Painter | Schuyler | 1st Lieut. |
| Oscar Paul Schnetsky | Schuyler | 1st Lieut. |
| Carl Frederick Roh | Seward | Captain |
| Joseph Andrew Fleischman | Shelton | 1st Lieut. |
| Albert A. Fricke, 404 N 24th St. | South Omaha | Captain |
| John Arthur Peters | Springfield | 1st Lieut. |
| Walter Lawrence Johnson | Steinauer | 1st Lieut. |
| Vernard Anthony Lanphier | Sutton | 1st Lieut. |
| Leo Dow Harman | Table Rock | 1st Lieut. |
| Joseph Milton Curtis | Tecumseh | 1st Lieut. |
| Henry Albert Johnson | Tekamah | 1st Lieut. |
| Albert Ernest Cone | Oxford | 1st Lieut. |

| | | |
|---|---|---|
| Charles Philip Brenn | Western | 1st Lieut. |
| Irwin Linburg | Walthill | 1st Lieut. |
| Harry Lee Wells | West Point | 1st Lieut. |
| Roy Crook | Winnetoon | 1st Lieut. |

### SUPPLEMENTARY LIST—AUGUST 8 TO 18, 1917.

| | | |
|---|---|---|
| Tyre Kinser Jones | Ainsworth | 1st Lieut. |
| Charles Lawson Hensel | Ansley | 1st Lieut. |
| Neal Patrick McKee | Atkinson | 1st Lieut. |
| Claude Ross Laird | Blue Hill | 1st Lieut. |
| James Folwell Wood | Burwell | 1st Lieut. |
| Francis Joseph Stejskal | Crete | 1st Lieut. |
| Charles Edward Palmer | David City | 1st Lieut. |
| Edward Edmond Sweeney | Filley | 1st Lieut. |
| Robert Claud Rhode | Gering | Captain |
| Clay Eli Hulling | Hayes Center | 1st Lieut. |
| Clinton Daniel Heine | Hooper | 1st Lieut. |
| Charles Edward Romy | Johnstown | Captain |
| Wilber K. Mylar | Kimball | 1st Lieut. |
| Terrence Calvin Moyer, 1315 K St. | Lincoln | 1st Lieut |
| Roland Ray Reed | McCook | 1st Lieut. |
| George Lesley Riley | Merna | 1st Lieut. |
| James G. Muir | Milford | 1st Lieut. |
| Frederick Dennison Carpenter | Neligh | 1st Lieut. |
| Frank Lee Frink | Newman Grove | Captain |
| Clinton Quincy Dodd | Newport | 1st Lieut. |
| Frederick Josias Wurtele, 312 Vine St. | North Platte | Captain |
| George William Earle | Oakdale | 1st Lieut. |
| Jeremiah Smith Alexander, City Nat. Bk. | Omaha | 1st Lieut. |
| John Calvin Davis, Jr., 2114 Cuming | Omaha | 1st Lieut. |
| Jacob Martin Erman, 1620 Cuming | Omaha | 1st Lieut. |
| Lynn Thompson Hall | Omaha | 1st Lieut. |
| John Holst, Jr., 694 Brandeis Bldg. | Omaha | 1st Lieut. |
| Harry Jerome Jenkins, 2733 So. 9th | Omaha | 1st Lieut. |
| Henry Bassett Lemere, Br. Theater Bldg. | Omaha | Captain |
| Adolph Bernard Lindquest, 411 Br. Bldg. | Omaha | Captain |
| Edward Huntington McLean, 3104 Woolworth | Omaha | 1st Lieut. |
| Otis Martin, Immanuel Hosp. | Omaha | 1st Lieut. |
| William Henry Mick, 211 So 36th | Omaha | Captain |
| Frank Joseph Stodden, 5617 No. 19th | Omaha | 1st Lieut. |
| Vernon Vivaldo Talcott, 2411 Laurel Ave. | Omaha | 1st Lieut. |
| Egerton Thomas Wilson | O'Neill | 1st Lieut. |
| Ellis Herbert Whitehead | Osmond | Captain |
| Charles B. Edwards | Overton | 1st Lieut. |
| Wesley Charles Becker | Papillion | 1st Lieut. |
| Glyndon A. Young | Ponca | Captain |
| J. Jay McCarl | Rosalie | 1st Lieut. |
| Laird W. Elwood | Shickley | 1st Lieut. |
| Bernard Vincent McDermott | Stuart | 1st Lieut. |
| Charles Howard Davies, 210 Broadway | Tecumseh | 1st Lieut. |
| James Stewart Bell | York | 1st Lieut. |

### SUPPLEMENTARY LIST—AUGUST 20 TO 31, 1917.

| | | |
|---|---|---|
| Arthur Marinus Sonneland | Norfolk | 1st Lieut. |

### SUPPLEMENTARY LIST—SEPTEMBER 1 TO OCTOBER 1, 1917.

| | | |
|---|---|---|
| Ralph Philip Higgins | Ansley | 1st Lieut. |
| Claude Leroy Wills | Anselmo | Captain |
| James Medford Willis | Arapahoe | 1st Lieut. |
| Grover Cleveland Rice | Bayard | 1st Lieut. |
| Walter Edwin Kelly | Belvidere | 1st Lieut. |
| William Walter DeWolfe | Bennet | Captain |
| Alvin Hans Hendrickson | Brunning | 1st Lieut. |
| John Ray Beatty | Butte | Captain |
| Frederick Elmer Braucht | Coleridge | Captain |
| Clarence Minnick | Curtis | Captain |
| Trueman Isaac Wigin | Dorchester | 1st Lieut. |
| James Sherwood Taylor | Fairbury | Captain |
| Sam David Gowan | Falls City | 1st Lieut. |
| Henry Rufus Miner | Falls City | Captain |
| Fred Edward Dargatz | Gilead | 1st Lieut. |
| George W. Strough | Hickman | Captain |
| Adin Hilton Webb, Office of Public Instruction | Lincoln | 1st Lieut. |
| Arthur Emile Gadbois | Madison | Captain |
| John Jacob Fossler | Millard | 1st Lieut. |
| Avedis H. Sissakien | Niobrara | 1st Lieut. |
| Chas. W. W. Harms, Nebraska Methodist Hosp. | Omaha | 1st Lieut. |
| William Joseph Leary, 501 No. 41st Ave. | Omaha | Captain |
| Leonard Otto Riggert, University Hosp. | Omaha | 1st Lieut. |

| | | |
|---|---|---|
| Claude Thomas Uren, 3301 Dewey Ave | Omaha | 1st Lieut. |
| Abraham Greenberg, 409 Brandeis Theater | Omaha | 1st Lieut. |
| John Raymond Kleyla, 4706 Cass Street | Omaha | 1st Lieut. |
| W. Eugene Wolcott, 1240 First Nat. Bk. Bldg. | Omaha | 1st Lieut. |
| Frank Banks Slusser | Polk | 1st Lieut. |
| Bert Fuller Gleason | Randolph | 1st Lieut. |
| William Robert Peters | Stanton | 1st Lieut. |
| James Allen Trowbridge | Superior | Captain |
| Merit Wood | Tekamah | Captain |
| Frank Clark Genung | Wausa | Captain |
| Otto Theodore Hansen | Wausa | Captain |

### SUPPLEMENTARY LIST—OCTOBER 1 TO 12, INCL.

| | | |
|---|---|---|
| Frederick Cameron McIsaac | Ashland | Captain |
| Frank Dooley Burgess | Cedar Rapids | Captain |
| Czar Clinton Johnson | Creighton | Captain |
| William John Hawes | Fairbury | 1st Lieut. |
| Augustus Charles Barry | Maywood | 1st Lieut. |
| Earl William Fetter | North Platte | 1st Lieut. |

### SUPPLEMENTARY LIST—OCTOBER 13 TO NOV. 15, INCL.

| | | |
|---|---|---|
| Finley Joseph McRae | Albion | Captain |
| William Roy Cornelius | Cody | 1st Lieut. |
| William E. M. Devers | Cowles | 1st Lieut. |
| McDonald Ryan | Danbury | 1st Lieut. |
| Herbert Homer Smith | Fremont | Major |
| James McDowell Patton | Omaha | Captain |
| Charles Willard Way | Omaha | 1st Lieut. |
| Lester Kenneth Strate | Sutton | 1st Lieut. |

### SUPPLEMENTARY LIST NOV. 16 TO DEC. 15, INCL.

| | | |
|---|---|---|
| Hiram Henry Avery, 1416 Fourth St., | Florence | 1st Lieut. |
| Neill J. Everett, St. Joseph's Hosp | Omaha | 1st Lieut. |
| August Frederick Jonas, Brandeis Bldg. | Omaha | 1st Lieut. |
| John Beekman Potts, 567 Brandeis Bldg., | Omaha | Captain |
| Joseph Phillip Swoboda, St. Joseph's Hosp | Omaha | 1st Lieut. |
| William Edward Mogan | Petersburg | 1st Lieut. |
| Victor Lamont Siman | Winside | 1st Lieut. |

### SUPPLEMENTARY LIST DEC. 16 TO JAN. 6, INCL.

| | | |
|---|---|---|
| Frank Alonzo Wilmet | Bethany | 1st Lieut. |
| Griffith Alonzo McKay | Indianola | 1st Lieut. |
| Orville Dawson Johnson, 16 W 23d St. | Kearney | 1st Lieut. |
| Maurice Edward Grier, 1229 1st Natl. Bk. Bldg., | Omaha | 1st Lieut. |
| Joseph Daniel McCarthy, St. Joseph Mem. Hosp. | Omaha | 1st Lieut. |
| Louis David McGuire, St. Joseph Mem. Hosp. | Omaha | 1st Lieut. |
| Norman Thomas Hale | Eustis | Captain |
| Henry Blakeslee Boyden | Grand Island | 1st Lieut. |
| Thomas Ernest Atkinson | Mullen | 1st Lieut. |
| Clarence Michael Hyland, 24th & Ames Ave. | Omaha | 1st Lieut. |
| Riley Edward Roche | Sidney | 1st Lieut. |
| Guy Sterling Philbrick, St. Joseph's Hosp | Omaha | 1st Lieut. |
| Harvey Burr Stapleton, St. Joseph's Hosp | Omaha | 1st Lieut. |
| Joseph Alphonse Furlong | Springview | 1st Lieut. |
| Thomas Jefferson Jones | St. Edwards | Captain |

### SUPPLEMENTARY LIST JAN. 5 TO FEB. 1, INCL.

| | | |
|---|---|---|
| Henry Clay Gibson, Coffee-Pitman Bldg. | Chadron | 1st Lieut. |
| George Henry Bentz | Fairfield | Captain |
| Francis Marion Swartwood | Bethany | 1st Lieut. |
| Harry Weber McFadden | Greenwood | 1st Lieut. |
| Eugene Clair Foote | Hastings | Captain |
| William Louis Sucha | Hastings | 1st Lieut. |
| Miles John Breuer, 216 Security Mutual Blg. | Lincoln | 1st Lieut. |
| George Worthington Covey, 514 1st Nat Bk Bldg, | Lincoln | 1st Lieut. |
| Harry Ernest Flansburg, 1645 A St. | Lincoln | 1st Lieut. |
| Eward W. Rowe, 514 1st Nat. Bank Bldg. | Lincoln | Captain |
| James E. M. Thomson, 1401 M St. | Lincoln | 1st Lieut. |
| Hal D. Wilmeth, 621 South 17th St. | Lincoln | 1st Lieut. |
| Arthur Jacob Griot | Long Pine | 1st Lieut. |
| John Shaffer Simms | North Platte | 1st Lieut. |
| Adolph Nicholas Thoms | Odell | 1st Lieut. |
| Edson Lowell Bridges, 3405 Farnam St. | Omaha | Major |
| Arthur Clarence Brown, 1122 W. O. W. Bldg. | Omaha | 1st Lieut. |
| Gustave William Dishong, 3319 Dodge St. | Omaha | Captain |
| Sanford R. Gifford, 4 Benlow Court | Omaha | 1st Lieut. |
| Charles Aaron Hull | Omaha | Major |
| Vincent Lee Jones, Creighton Med. Coll. | Omaha | 1st Lieut. |

| | | |
|---|---|---|
| James S. McAvin, 4234 Mason St. | Omaha | 1st Lieut. |
| John Clyde Moore, 2005 Manderson St. | Omaha | Captain |
| John Rudolph Nilsson, 1325 North 33d St. | Omaha | Captain |
| Norman Call Prince, 507 City Natl. Bank | Omaha | Captain |
| Clyde Augustus Roeder, 834 Brandeis Theat. Blg. | Omaha | Captain |
| Edmon Erwin Gallagher | O'Neill | 1st Lieut. |
| Charles Percy Charlton | Palmyra | 1st Lieut. |
| James Clyde Waddell | Pawnee City | Captain |
| Joseph Benson Schrock | Scottsbluff | 1st Lieut. |
| Louis John Storkan | Wilber | 1st Lieut. |
| George Halley De May | Wilsonville | 1st Lieut. |

### SUPPLEMENTARY LIST FEB. 2 TO 28, INCL.

| | | |
|---|---|---|
| Oscar Frederick Lang | Falls City | 1st Lieut. |
| John Henry Regan | Grand Island | 1st Lieut. |
| Louis Carl Bleick, 536 World-Herald Bldg. | Omaha | Captain |
| Neil Louis Criss, 404 City Nat'l. Bk. Bldg. | Omaha | 1st Lieut. |
| John Lovejoy Linn, 406 North 39th St. | Omaha | 1st Lieut. |
| Andrew Jackson Smith | Salem | 1st Lieut. |
| Raymond B. McNamara | Wynot | 1st Lieut. |

### SUPPLEMENTARY LIST MARCH 1 TO 31, INCL.

| | | |
|---|---|---|
| Samuel James Stewart | Hastings | Captain |
| Ward William Hedlund | Ingleside | 1st Lieut. |
| John William Duncan, 1122 W. O. W. Bldg., | Omaha | 1st Lieut. |

### SUPPLEMENTARY LIST APRIL 1 TO 30, INCL.

| | | |
|---|---|---|
| Cecil Clare Copeland | Beaver City | Captain |
| Edgar Allen Pickens | Benkelman | 1st Lieut. |
| Perry Delphos Kelly | Nemaha | 1st Lieut. |
| Edwin Clyde Henry, Lord Lister Hospital | Omaha | Major |
| George Watson Twomey, 1314 Douglas St. | Omaha | Captain |

### SUPPLEMENTARY LIST MAY 1 TO 31, INCL.

| | | |
|---|---|---|
| Samuel Rice Hopkins, Clarke Hotel | Hastings | Major |
| Isaac Louis Bogen, 1105 O St. | Lincoln | Captain |
| William Shepherd | Rulo | 1st Lieut. |
| Arthur Andrew Smith, Mary Lanning Memo. Hosp., | Hastings | 1st Lieut. |
| Leroy Crummer, 801 City Nat'l. Bank Bldg. | Omaha | Captain |

### SUPPLEMENTARY LIST JUNE 1 TO 30, INCL.

| | | |
|---|---|---|
| Isaiah William Haughey | Aurora | Captain |
| George Henry Brash | Beatrice | Captain |
| Frederick Watson Buckley | Beatrice | 1st Lieut. |
| Leo Achille DeLanney | Belgrade | 1st Lieut. |
| Leo Julius Kilian | Blair | 1st Lieut. |
| John G. W. Westerhoff | Carleton | Captain |
| Albert Atchiell Ashby | Fairmont | 1st Lieut. |
| Albert Edward Buchanan, 1335 N. Broad St. | Fremont | Captain |
| Grove Heman Rathbun | Fremont | Captain |
| Royal Woods | Haigler | Captain |
| Albert James Boren | Hastings | 1st Lieut. |
| Julian Raymond Blackman | Hastings | Captain |
| Claude Bernard Calbreath | Hastings | Captain |
| Eli Burton Hamel | Hastings | Captain |
| Allan John Cameron | Herman | Captain |
| Justus Edgar Olsson | Lexington | Captain |
| John Mills Mayhew | Lincoln | Major |
| Roscoe Likes Smith, 211 1st Nat. Bk. Bldg. | Lincoln | 1st Lieut. |
| Stanley Gillum Zemer | Lincoln | 1st Lieut. |
| George Heman Walker, 402 Ganter Block | Lincoln | Captain |
| Royal Scudder | Malmo | Captain |
| Lee Campbell Adcock, 303 Karbash Bldg. | Omaha | Captain |
| Erskine Marshall Barnes, 1018 1st Nat. Bk. Bldg. | Omaha | Captain |
| William Porter Haney, 705 Brandeis Th. Bldg. | Omaha | Captain |
| Frederick Henry Kuegle, 630 Park Ave. | Omaha | Captain |
| Elmer Ray Porter, 600 Brandeis Bldg. | Omaha | Captain |
| Willard Henry Quigley, 302 N. 16th St. | Omaha | 1st Lieut. |
| Thomas Jay Vanderhoff | Rising City | 1st Lieut. |
| Frank Wallace Plehn, 1517½ Broadway | Scottsbluff | 1st Lieut. |
| Roy Philson Stoops | Scottsbluff | Captain |
| Seth Ellsworth Ragan | Seward | Captain |
| Harold Eugene White | Swanton | 1st Lieut. |
| Arthur Benjamin Cramb | Tecumseh | 1st Lieut. |
| Washington Irving Devers | Upland | Captain |
| Ernest Owen Weber | Wahoo | Captain |
| Ernst Valentine Neumann | Wausa | 1st Lieut. |
| Homer E. Johnson | Winnebago | 1st Lieut. |
| Polk Richards | Winnebago | 1st Lieut. |

## Grades of Medical Officers in the Army

By Major Louis L. Seaman, M. D.

(North American Review)

A grave crisis for the American soldier awaits the decision of Congress—a military question of most serious import— although to the casual observer it may seem comparatively trivial. It is embodied in the bills introduced by Mr. Owen in the Senate, and Mr. Hicks in the House for "fixing the grades of commissioned officers of the Medical Corps of the United States Army on active duty, and for other purposes," and is as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that hereafter the commissioned officers of the Medical Corps and of the Medical Reserve Corps of the United States Army on active duty shall be distributed in the several grades in the same ratios heretofor established by law in the Medical Corps of the United States Navy. The surgeon-General shall have authority to designate as "consulants" officers of either corps—and relieve them as the interest of the service may require.

Sec. 2. That the Medical Corps, through its officers, shall have supervision and control of the hygiene and sanitation of posts, camps, commands and troops under such regulations as the President may establish, with authority to issue and enforce such orders as will prevent or dimish disease, except that when such orders interfere with necessary war operations the military commander may suspend them.

All of these means as follows:

Shall the American soldier in the present war be sacrificed to preventable diseases, through red tape and the petty jealousies of Line and Staff officers —as has occurred to a frightful extent in past wars— or shall he be allowed to retain his health under the most advanced science of the age?

That is the real question Congress is asked to settle, —and when it is remembered that in every war in which the United States has engaged, indeed in all the prolonged wars of history (except the Russo-Japanese war)' the medical officer has had to combat the foe that has caused eighty per cent of the mortality— never less than four times, and often twenty times as many as the artillery, infantry, mines and all other methods of physical destruction combined, there should be no question as to the result.

The Surgeon General of the Army asks for higher rank for the members of his corps— that they shall be graded the same as in the Medical Department of the Navy— because it will add to the prestige of the Corps, and thereby increase their influence. Unquestionably increased rank will have some effect, especially when it is remembered that the Reserve Corps today constitute over eighty per cent of the total Medical Corps of the Army, and is made up of the cream of the American Medical Profession. But at the hearing before the Committee on Military Affairs of the Senate on March 15th, when discussing sanitary regulations and recommendations made by medical officers, Senator Owen said:

A brigadier general of the line does not hesitate to disregard advice bearing on typhoid fever or pneumonia which is given by an officer of subordinate rank, and unless the Medical Department has rank it is difficult for the line officers to realize that the advice which the medical officer gives should be taken upon the basis of its merits and not upon the basis of the rank of the one who makes the recommendation. Upon that point I think General Gorgas should explain to the Committee his opinion.

Gen. Gorgas.—I think that is the real argument from the standpoint of efficiency for this increased rank.

### Later Senator Hitchcock Asked This Question:

Suppose a division commander or a camp commander refuses to take the advice of a medical officer—advice which the medical officer deems essential. Has he any way of bringing it up to you, and can you issue superior orders to compel the recognition of the medical officer's advice through your rank as compared with the rank of that officer?

Gen. Gorgas.—Cases of that kind constantly coming up, where the medical officer disagrees with his division commander. He sends it up through the adjutant general. You know, I am just an advisory officer. I have not direct authority anywhere. The adjutant general sends it over to me practically for advise, but my action would go with regard to it. If I concur with the medical officer, the Secretary and adjutant general would take it into consideration. Of course, they are the final authorities in the matter.

Sen. Hitchcock.—The Secretary and the Adjutant general would finally decide the question:

Gen. Gorgas.—Yes.

Sen. Hitchcock.—So that your power is only advisory?

Gen. Gorgas. —My power is only advisory.

Sen. Hitchcock.—And even if there were a brigadier general on the spot, his power would be only advisory?

Gen. Gorgas.—In the Medical Department? Yes, his powers are only advisory.

Sen. Hitchcock.—So that mere rank does not give authority?

Gen. Gorgas.—It does not give authority.

Thus it is seen the medical officer or department in the army today has no authority. Without some authority—which may be exercised without interfering with the strategy or military operations of war, i. e., when the army is not actually engaged in battle—it is possible his department may again prove a humilating failure, as it has in every war in which our forces have ever engaged. I have been present, either as an officer or observer, in eight wars—in every continent in the world— and I assert that the medical officer in our army has not even the privileges which would enable him to maintain the health of the men who are entrusting to his care. He selects recruits because of their youth, health and physical ability to withstand the hardship of war. It should be his business, first, last and nearly all the time to maintain this condition—and he would do it if given adequate authority. Then, if he failed, he should be court-martialed and dismissed from the service. But he has no authority—not even over the ration. The vast majority of diseases which incapacitate an army result from autointoxication, which could be prevented by proper dietary. Witness the Spanish-American war, where in a period of three months, as stated in the report of the Surgeon General, "293 men died from battle and other casualties, and 3,681 from Disease;" and in this army of 170,000, there were 158,000 hospital admissions, or ninety per cent, although three-fourths of the men never left the camps of their native land. The Japanese army had for the same period about four per cent hospital admissions, including their wounded, or about 1/22 times as many. The vast difference in these figures illustrates the value of a medical and sanitary department properly equipped, and empowered to enforce practical sanitation and supervision of the dietary. I believe that if this department had been properly systematized, with sufficient numbers, with supervisory control over the ration, and wth power to enforce sanitary and hygienic regulations, the units of our army would have returned to their homes at the close of the Spanish-American campaign in better physical condition than when they entered it.

Disease is the silent foe that lingers in every camp and bivouac. It is this foe, as the records for the past two hundred years prove, that has been responsible for four times as many deaths as the guns of the enemy, not to mention the vast number of invalided, and pensions, the cost of which every twenty-five years is equal to the cost of the war from which they resulted.

Every death from preventable disease is an insult to the intelligence of the age, and when it occurs in the army, where the units are subject to discipline, it becomes a crime. The state deprives the soldier of his liberty prescribed his hours of rest, his exercise, equipment, dress, diet and the locality in which he shall reside, and in the hour of danger expects him, if necessary, to lay down his life in defense of its honor. It should therefore, give him the best sanitation and the best medical supervision that the science of the age can devise. For just as surely as the engineer who disregards the signal, or the train dispatcher who gives wrong orders, is responsible for the loss of human life which follows, so Congress is responsible for the thousands of soldier's lives stupidly, criminally sacrificed,—not on the glorious field of battle, but in camps from known preventable causes. It is for these men, never for those who fall gallantly fighting, that I offer my prayer.

The rank of Surgeon General should be commensurate with the importance of the department of which he is the head. He should be a member of the War College, and responsible only to the Secretary of War, or to the President. There should be conferred upon him and his subordinates final authority in all matters of sanitation and hygiene, except in the emergency of battle, when, of course all authority should devolve upon the officers of the line.

The importance of the Medical as compared with other Staff departments has never been sufficiently recognized or appreciated in our country. Until it is cleary realized that the most important function of the medical officer is the prevention of disease rather than its cure, the od custom will prevail. To be efficient, the medical officer must not only be a good surgeon, but a sanitarian, a bacteriologist, a chemist, and an administrator. Upon him devolves the duty of preventing disease, and his part in maintaining the effectiveness of the units makes him a most important factor in the military establishment.

The following ersolution was submitted by the writer at the meeting of The International Congress of Military Surgeons in St. Louis, 1904,and, after favorable report by the Executive Committee, was unanimously adopted:

Resolved, That the Association of Military Surgeons of the United States now assembled, respectfully petitions Congress at its next session to reorganize the medical departments of the United States Army and Navy on a broad basis similar to that of the countries most advanced in military sanitation, giving to their officers equivalent rank, dignity and power and to their personal ample numbers for the proper care of the ill and inured in military and naval service.

The adoption of the bills introduced by Senator Owen and Representative Hicks will go far toward rectifying a humiliating failure—one which, if the present war is sufficiently prolonged, may result in the defeat of our army, for more wars have been decided by disease than by bullets.

# THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, LINCOLN, MAY, 1919

Vol. III. Norfolk, Nebraska, August, 1918. No. 8

## CONTENTS.

Page
Letter from Arthur Dean Bevan 233
Some Observations on Surgical Successes and Failures, A. D. Dunn, M. D., Omaha 235
Lymphatic Drain of the Nose and Throat With Its Relation to Focal Infections, W. P. Wherry, M. D., Omaha 237
Bone Surgery, With Reports of Cases, Chas. H. Breuer, M. D., Lincoln 242
Pelvic Conditions Producing Bladder Symptoms, Max Emmert, M. D., Omaha 247
The Stay at Homes, I. N. Pickett, M. D., Odell 249
Osteopathy and Chiropractic 251
Editorial 256

Abstracts—

Viscereal Symptomotology in Nervous Diseases, Dr. F. X. Dercum 261
Parke: Cesarean Section in Treatment of Eclampsia 262
General Notes 262
State Notes 263
Orders to the Officers of Medical Reserve Corps of Nebraska 264

Chicago, July 22, 1918.

Dr. Joseph M. Aikin, Sec.,
Nebraska State Medical Association,
Brandeis Bldg., Omaha.

My Dear Doctor Aikin:

The medical profession of the country is confronted at this time with the problem of organizing the profession for war. There are two specific things that must be done. We must furnish to the government the necessary number of medical men for military service; this probably will be from thirty to forty thousand medical officers. At the same time, we must supply this required number of medical officers in such a way as to injure as little as possible our civilian communities through depriving them of necessary medical services. This carries with it the obligation not to cripple seriously the medical schools nor our hospitals.

In order to meet these requirements it is necessary to use the organization of the medical profession in a systematic way. The most important agency that can be employed in this work is the American Medical Association, with its splendid organization of county and state branches and the efficient machinery which it possesses.

The Journal of the Association reaches the great majority of the medical practitioners of the country and it, together with the journals of the state medical associations provides a point of contact with practically the entire profession.

One of the facilities of the Association which could not be duplicated even by the government itself, at unlimited expense, within any reasonable time, is the data from which is compiled the register of licensed physicians—the American Medical Directory. This is information concerning each licensed physician which has been gradually and systematically assembled, recorded and indexed in the course of years, at the headquarters of the association.

These card indexes of this data concerning registered practitioners of medicine at the Association headquarters, is of great value. They made possible the "Survey" of the medical profession of the United States, which was published in the Journal for June 1, and which is, therefore, now at the disposal of each county and state organization. They can be utilized in conducting a campaign for providing future increments for the Medical Reserve Corps by making an individual study of the practitioners in each county, to determine the physicians who have gone into military service, the ages of physicians, and other information which will assist in working out the problem.

The medical profession has responded more promptly to the call of the nation and has sent more of its membership into military service than any other profession, trade or business in the country. It was necessary that they should do this because the demand for medical men in war is larger than the demand made upon any other profession. The fact remains, however, that the profession has responded magnificently to the call to the colors. As the war continues and as the great military machine which is being built by the people of this country becomes greater and greater, it may become necessary to draft the medical profession up to 50 or 55 years of age, but this will not be done and should not be done unless the draft applies to all professions, to all trades, to men in all of the fields of human effort. It is probable, in fact it is almost certain, that the medical profession will be able to supply the necessary number of men by proper utilization of the organization and machinery of the American Medical Association and its component county and constituent state medical organizations without resort to draft.

With that end in view, I am writing to you and to all the presidents and secretaries of the constituent state medical associations and asking that the county medical societies of their state be organized for the purpose of accomplishing the following results:

1. To secure at least 20 per cent of the registered practitioners of the state for the medical departments of the Army and Navy.

2. In securing these men, a careful survey of each county, each medical school and each hospital should be made. No locality and no institution unless it is clearly over supplied should be allowed to furnish more than 50 per cent of its licensed practitioners; the association will endeavor to cooperate with the medical departments of the government in securing the necessary protection to communities, hospitals and medical schools.

3. Although it is desirable to secure at least 20 per cent from each county, care should be taken to analyze the local conditions, the area of the county, the population of the county, the number of practitioners per capita in the county and as a general proposition, I suggest that at least one physician be retained at home for each 1200 or 1500 population.

As you know, the Surgeon General of the Army has recently called for 5,000 men (see the Journal of the American Medical Association for April 13, 1918), and the Surgeon General of the Navy needs from 1,000 to 2,000 men. The plan which I am outlining to you will secure the number of men asked for to the present time. If it becomes necessary to call a larger number, it will of course be necessary to increase the percentage furnished by each state, possibly to 25 per cent, instead of the present 20 per cent. It will be desirable for you to organize your state so completely and thoroughly that if a further call comes from the government, this can be promptly met.

As president of the American Medical Association, I am asking you to use the machinery and organization of your state and county societies in the most efficient and earnest way for the definite, concrete purpose which I have outlined. It is clearly the duty of the American Medical Association and its organization and machinery in the fullest possible way to meet the requirement; we all welcome the assistance and cooperation of all associations and agencies that may prove of service in securing the desired results. In doing our part in the organization of the medical profession for war, we gladly place directly at the disposal of the medical departments of the Army and Navy our entire organization and machinery.

The American Medical Association is now preparing and will shortly make available to the secretaries of the state associations and of the county societies complete lists of the licensed physicians in the respective states and counties. On these lists symbols will be entered indicating the response which the physicians named have made to the call of the nation.

This work is in charge of the secretary of the American Medical Association who will communicate directly with the secretary of the state and, if desired with the county organizations.

Yours very truly,
Arthur Dean Bevan, President.

## Some Observations on Surgical Successes and Failures.*

A. D. Dunn, M. D., Omaha.

When I acceded to the request of your chairman to come before you with certain of my views and criticisms of surgical practice in Nebraska, based on eleven years experience, I thought the task a simple one. The fund of material was adequate, the subject was up to the minute, and it seemed that only a little skill and discretion were needed in distributing the felt on the hammer. But when I started on my way I found it beset with many dangers and pitfalls. First I had to avoid all semblance of an attitude open to the "holier than thou" suspicion, for the mistakes and faults lie not alone in one camp. Then I had to emphasize what were to me surgical shortcomings because that was my subject, but I must also make it clear that I was holding no brief for the internist. With the above dangers clearly in mind I had at first thought to cite numerous case histories in order to reveal to the surgeon the existence of failures but it needs little wit to discover the other fellow's mistakes. William Mayo once said that he felt that his percentage of non-recurrences in hernia operations was so low for the simple reason that the recurrences went elsewhere. This proclivity of patients to go elsewhere gives the internist a good opportunity to review the failures of his surgical confreres because the surgical failure is quite apt to consult the internist rather than to return to his surgeon. Fully thirty per cent of the cases who consult me have already been laparotomized—an inviting terrain to investigate. In order to ascertain the results of operative intervention the inquiries have often been made: "What were you operated for" and "did the operation cure or benefit the condition from which you suffered." This last inquiry became necessary because the human perversity of holding somebody responsible for one's suffering is such that an emergency operation for a diffuse peritonitis is even held casual for subsequent gastro-intestinal disorders. In full realization of the possibilities of the casuistic method I discarded it in favor of a study of the reasons why there are surgical successes and failures. I had noted that the results of surgery coming from different sources varied and I studied what seemed to me the good and the bad points in the methods and practices of various men and drew my conclusions. It is to these conclusions that I wish to direct attention.

It would seem that surgical successes were largely dependent on four fundamental factors: (I) adequate diagnosis, (2) application of the science of pathology to surgical practice, (3) care in avoiding trauma, in accomplishing hemostasis and in restoration of the field of operation to as near a normal state as possible, and (4) after treatment. I assume that the operator is equipped with a good aseptic technique and sufficient anatomical knowledge. To discuss the above four variables would be truistic were I not convinced that the sins committed against any or all of them are legion and responsible for much avoidable suffering.

### Inadequate Diagnosis.

The value to the patient of an operative interference varies directly with the anteoperative study of that patient's morbid physiology—a truism—yet any number of patients are sent to the hospital after a few minutes session in the down-town office and operated the next morning for a chronic intra-abdominal condition—the operator satisfying his conscience with "the condition is surgical anyway and we'll cut in and see." He may see plenty of abnormal things when he gets in, fix up those that are handy and seem important, and get out leaving the patient's future too largely in the hands of providence. I have seen appendices and gall bladder taken out for renal stones and for Pott's disease, for diaphragmatic pleurisy and for tuberculosis of the lung, for colon stasis, and for achylia gastrica, etc., and by men whom I would trust to operate on me were my case adequately studied. There are two reasons apparent why it is difficult for a surgeon to fully study a case. Firstly: If he is a successful surgeon the demand on his time for operative work is such that it leaves him little time for diagnostic study and his thoughts naturally center about the methods of surgical procedure. Secondly: The surgeon's end and interest is in operative interference—not in finding out what is the matter with the patient. Therefore complex cases should also be studied by men whose prime motives are diagnostic, and who have no financial or burning personal interest in seeing a case come to the operating table. The fascination of operative work in itself suffices to lend a subconscious bias to the surgeon's thinking.

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

Since I have been in Omaha I have heard much of team work and of cooperation between laboratory men, internists and surgeons, but I have seen very little that has not been either spasmodic or unworthy of the name. Many of the internists consultation cases show the fish-out-of-water respiration indicative of immediate dissolution. The only chance left to be of service is to share in the rapidly settling on us of responsibility. The "neuro" who has been operated several times is another favorite dispensation. It has not been the rule that a vague abdominal case is referred with "this looks like a gall bladder to me—I wish you would run her through and see what you can make out of it." And this without the patient's insisting upon it is still more exceptional.

Differences in viewpoint should not result in depriving the patient of the benefits of cooperative study. There will always be legitimate differences of opinion as to whether certain cases should be treated surgically or medically. I may differ with the surgeon as to whether a gastric ulcer should be treated medically or operated upon but I hold the surgeon culpable if he operates without having roentgenray, the usual gastro-enterological, and physical examinations made whenever the patient's condition permits of such studies. Although I feel that the surgeon should be allowed much lee-way in instituting operative interference in such otherwise fatal conditions as gastric carcimoenata yet to open an abdomen for a tumor without any further preoperative rites than the "laying on of hands" is not science but religion.

### The Function of Pathology.

Tantamount with pre-operative study of morbid physiology should be the pathological study of all tissues removed at operation. The failure to do this must be laid squarely at the door of the surgeons for they have controlled and still control the destinies of our hospitals. There is only one Nebraska hospital in which for any considerable period of time a systematic study of tissue has been made by a trained pathologist. Until such routine examinations are made, surgical diagnosis and treatment must remain inadequate. Superimposed on a basic deadhouse pathological experience, systematic study of the living pathology by pathologist and surgeon makes the judgment of the latter sure and removes his results farther from the ruling of chance.

### Technical Variables.

From a desultory study of numerous cases that have been surgicalized and from personal operating room observations more trouble could be avoided if the question of trauma were given more serious attention. J. B. Murphy was wont to say: "You hurt the patient just as much as if he were not asleep only he doesn't feel it." Joseph Blake said that "the best surgeon is he who thinks in terms of individual cells." One cannot help but notice that in certain quarters millions of cells are sacrificed to the American God of Speed. Cases of post-operative adhesions are the bane of my existence. They demand help. One tries to help them and they are usually the worse for ones efforts. I feel that in many instances these post operative troubles could have been obviated had sufficient care been given to the avoidance of trauma, to hemostasis, and to peritonization. The best abdominal operator when he knows what to do and how to do it, is he who traumatizes least, peritonizes best, and controls hemorrhage most effectively.

### After Treatment.

Neglect of the necessary details of after treatment is responsible for many failures. Printed instructions as to diet, hygiene, exercise, etc., made out to fit various case groups would bridge many a gap. I wish to illustrate with just one group of failures due to post-operative neglect, i. e., the establishment of the cathartic habit and of a chronic constipation which will ultimately bring the patient to the internist or again to the surgeon with some phase of the disease commonly designated as mucous colitis. I have been interested in noting how frequently a chronic constipation has followed surgical intervention. This is not to be wondered at when the patient is often sent home with a prescription for Hinkle's Pills or some other favorite cathartic. A follow-up system might teach us all something about after treatment.

### L'Envoi.

The surgeon wields the most powerful therapeutic weapon we have in our fight against disease. I have been repeatedly thrilled by the operative successes obtained in many of my cases. My remarks have been meant as constructive not destructive criticism. May they be so taken. Everything that has been said here has often been said before. My excuse for saying these things again is that the facts show that they have not been said often enough. I thank you.

### Discussion.

**Dr. H. J. Lehnhoff, Lincoln.**—I knew that I was one of the men to open this discussion only five minutes before this paper came on, as the programs did not reach us at Lincoln. I have nothing to add to what Dr. Dunn has said. If I were going to offer a criticsm of the practice of surgeons in general, most of it would come under the line of failures in diagnosis. The few cases that come to me after operation, and the cases I meet in consultation after surgeons have decided that operative means are necessary, are those in which there has been more or less neglect in the matter of diagnosis. I do not know that it would do any good to repeat some of those cases. The most prominent are those in which an incision below the diaphram was made or advised in cases in which pneumonia or its sequellae were present. Those have far outnumbered any other class of cases in which a mistake was made in diagnosis. The next most prominent general class is that in which we have abdominal pain that is not due to abdominal pathology. In these cases the pain is not due to any particular cause, but to a number. Cardiac diseases are the most common of this general class.

The next point in the matter of diagnosis which I think the surgeon sometimes forgets is this: He does not figure out, before he has removed the offending pathology, just what the patient is going to do. From a number of standpoints he does not know just what the patient will do, and has not made himself responsible for the physiological economy of other organs with which he has not meddled surgically. If he intends to operate on a kidney pathology, in a majority of cases he is careful to note what the kidney function is. In some cases, however, he operates upon a kidney and disturbs at least a part (and sometimes the entire function) of that kidney. He does not know whether the other kidney can care for the economy of that patient or not. I see no excuse for that at all.

Then, in general, the surgeon gets in a hurry to operate and does not examine the patient to learn his actual condition. It surely does seem a crying sin to have so many come to the office who have been operated upon, not only once, but two or three times. Last week a patient came in who had been operated upon three times. I do not believe she ever had any surgical pathology at all. She has an unaccounted-for pain, and the surgeon says, "let's see what is the matter." Then he proceeds to "see" by looking in. At all times it is a bad practice.

In regard to the post-operative treatment, there is great advantage in getting the patient up as early as possible, but I think sometimes it has been overdone. Some patients lack the resistance to be up at that particular time.

**Dr. C. A. Roeder, Omaha.**—I think this is a very valuable paper and no personalities about it. It is purely constructive criticism. There is no man living who has the grey matter or brain power to assume the entire responsibility of the outcome of any one individual, especially in a chronic condition. I think any surgeon can afford to spend $25 out of his $150 to get a little more cooperation as well as knowledge.

---

## Lymphatic Drain of the Nose and Throat With Its Relation to Focal Infections.*

W. P. Wherry, M. D., Omaha.

So much has been written, and so much has been said, on the question of focal infections and focal sites, that a grave tendency has developed to empirically argue, to practice and to think. I feel it is well, therefore, to pause for a moment and investigate the fundamental problems concerned, to correlate the histopathological problems with the abstract clinical facts deducted and perhaps in this way, the personal prejudices of the operator will be discounted, the truths learned and the plane of focal infections more nearly established.

In my study of this vast and as yet little defined phenomena, the most interesting tangent along which I have worked, has been the lymphatic drainage of the nose and throat, and I am going to take up the time allotted me in this program, to present some of the clinical problems that I have solved through this study.

It may be wise to preface my thoughts with the statement, that much of the embryology of the lymphatics, the origin and definite function of the lymph fluid, have and are the subjects of controversy, and some one of our eminent authorities has said that certain of the problems can not be solved by science, that their solution belongs to the domain of philosophy. Therefore if perhaps, as I proceed, my logic seems to deviate from the lines laid down by scientific methods, I hope you will consider me clinically visionary rather than blush for my fundamental information.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

Doubtless it will be wise to briefly review the present known anatomical status of the lymphatics of the nose and throat, assuming there are some present who have forgotten.

The lymphatics of the nose, are characterized by their extraordinary richness in anastomosis and lymph nodes. The capillaries in their ramifications are frequently interspersed with filtering follicles, nodes and glands, each of a little more complex histologic structure, the final gland exerting the greatest filtering properties. The lymph stream passes through this network of channels to ultimately enter the general circulation, and the number of glands thus interposed tend to purify the passing lymph, and protects the blood stream from sudden and extensive invasion of bacterial agents, and too, aside from the mechanical filtration there is a biochemic or lytic action of the plasma and the cellular substances to alter the protein molecule in the germ, changing its toxic fraction and thus lessening its virulency. However, extensive experimentation has positively proven that bacterial agents can pass through successively each of these interposed filtering stations, and set up not only a local reaction in the immediate parts involved, but being expended in the general circulation produce distal infections. I believe it is accepted that it is the leucocytes rather than the plasma that are the carrier's of foreign substances including bacteria, that the leucocytes envelopes the germ, and carries it to the next lymph gland, and if unchecked it passes on through successive glands, into the pulmonary circulation to later be sifted out by the pleura, the bones, the meninges, the joints, the appendix, the kidneys, etc.

The nasal mucosa is exceedingly rich in lymphatic capillaries, situated immediately under the epithelium and pursuant to the law of Tiechman as applied to the lymphatic system, their development is scant and slender where the mucosa is thin and attenuated, and abundant when the mucosa is active and voluminous. Thus in the septum the lymphatics are few, while in the respiratory portion of the lateral wall they are numerous and active. A phenomenon that will be dwelt upon later.

This network of capillaries anastomoses over the entire nazal mucosa and forms a perfectly closed system of vessels and collects into four more or less independent regions, namely the anterior fourth, the olfactory region, the respiratory region, and the septal.

The collectors from the anterior fourth unite into an anterior trunk that unites with the external nose and becomes tributary to the submaxillary and deep cervical.

The collectors from the olfactory, respiratory and septal regions unite into local trunks, all three uniting into a posterior trunk that in reality drains the entire posterior three-fourths of the nose, including all of the inferior turbinates and middle turbinate regions. The posterior trunk divides into two pedicles that passing into the lateral wall of the pharnyx, unite just below the orifice of the Eustachian tube at what is truly a common meeting place or central station for the lymphatic drain of the nose, sinuses, ear and pharyngeal vault. To be more definite, the entire lymph stream from the truly working part of the nose and ear must pass through this junction point closely related to the oriface of the Eustachian tube.

There are some lymphatics that enter directly into the tube, and extend up the tube aways, others wind around the tube, thus a very rich peritubular network is created, and that tends much toward explaining many of the otitic problems so often associated with nasal suppurations.

From this point, the stream takes two courses, certain channels drain outward and downward directly into the deep cervical, while others anastomose with the retrolateral pharyngeal capillaries and later drain into the deep cervical.

The lymph vessels of the tonsils, three to five in number drain into the deep superior cervical. One or two occasionally will drain into a gland situated under the posterior belly of the diagastric and covered by the Sterno-Cleido mastoid.

To summarize then the lymphatics of the nose and pharynx, the tonsillar ring, the teeth, the mouth, all anastomose with each other. The median line forms no barrier, the sides being closely inter-related and all drain into the deep cervical.

The intimate lymphatic relation of the nose and tonsils has been proven by many interesting experiments, and I will quote

Hartz, who in turn quoted the experiments of V. Lenhardt, who injected the nasal mucosa of eighteen dogs with china red, using the inferior turbinate region as his site of injection. His idea was to determine the direction of the lymph stream in vivo, and to trace the connection with the tonsils. The dogs were chloroformed and killed from two to seven days after the injection, when an examination was made of the parts, the red inert matter aiding to find the lymphatic tracts. His conclusions were that lymphatic channels connect the nasal mucosa directly with the tonsils; that the lymph stream in vivo is in the direction of the tonsils. His experiments corroborated the assumption on clinical grounds of B. Franke, that the tonsilitis secondary to operation upon the turbinates is conveyed by the lymphatic connection and that the infection is not by continuity nor by way of the blood stream. Further he proved that injection on one side was just as liable to be found on both tonsils or only on the opposite tonsil. Further Lenhardt found the colored substances within the body of the leucocytes mostly in the deeper portion of the tonsils and the microscopic pictures revealed the leucocytes were migrating towards the surface of the tonsils.

Numerous other experiments along the same line corroborate these same findings, and it would seem that the assumption of the tonsils being frequently infected secondarily in acute processes in the nose and accessory sinuses, and the nasopharynx is not without a scientific basis for argument.

The question arises then in looking for a probable site for a focal syndrome, that to consider only one possibility, let us say the tonsil, the investigator is very liable to be disappointed. Let me cite a case record in question.

Mrs. D., age about 35. History of arthritis for about four or five years. About one year previous, had been referred by an eminent internist to a specialist, who had advised the removal of the tonsils. Under an anesthetic, he succeeded in removing the left, but a portion of the right was left in, due to excessive hemorrhage. The original syndrome continued, and in due time (a few months) was having more throat trouble than formerly. This time, she consulted me, and my examination revealed the remaining tonsil stump on the right, very much buried and containing much pus, with a compensatory left lateral pharyngeal fold, assuming on first glance almost the appearance of a large cryptic tonsil, in fact the patient had been informed by a very good interist, that the left tonsil, instead of having been removed, was pushed back on the lateral pharyngeal wall. My examination of the nose, failed to reveal any suspicious sites, and I advised the removal of what remained of the right tonsil, assuming that the compensatory gland on the left side was due to the constant presence of pus in the fauces. The right tonsil was removed, but with no cessation of the distal symptoms and the continuance of the glandular infection in the pharynx.

The teeth were excluded, and the nose became our particular effort. The X-ray revealing a suspicious right sphenoid. This was opened, and found full of pus, there having been no intranasal evidence of its presence. Almost at once, the symptoms began to subside, the pharyngeal glands have now nearly subsided, and the only evidence remaining is an occasional supraorbital headache, always associated with an increased pharyngeal irritation, and which in my opinion is a simple exacerbation in the sphenoid. This case splendidly illustrates the intimate association between the accessory sinuses and the tonsils. I feel the tonsils here, were secondarily infected, that the sphenoid was the focal site, yet the distal symptom could be maintained by absorption from not only the sphenoid, but the pharyngeal glands, the tonsils, the cervical glands each in turn being involved and that each in turn could serve as a focus with the sphenoid as the base.

A sequence of problems such as presented in this case, very well explains the phenomenon so often noticed, where, after the removal of tonsils, the distal symptoms continue or may be only relieved for a short time, the explanation of the failure is that the removal of the tonsils relieved only one link in the chain of foci, this link was compensated for in a short time by the enormous hypertrophy of the lateral pharyngeal lymphatic fold, which being fed from above, continued to shoot the selective protein into the circulation. That after the sphenoid, the basic site was disposed of, we still had these hypertrophic glands to deal with, and the distal focal symptom syndrome was not checked until the entire focal chain was stopped.

Reasoning from experience, I feel that I am entitled to state in rather an abstract way, that the reason for many failures in this new work, is not that the tonsils on the site attacked was not the focal point, but that it was not the entire focal possibility, that the operator or investigator was too easily content to stop at the empirical tonsil, or was not familiar enough with his anatomy to know how to investigate further, in which later instance he was presuming when he professed ability as a specialist.

I believe most emphatically, that when an adult tonsil has become thoroughly infected, then the character of its histologic construction mitigates against it ever being a good tonsil, and experience says that such a tonsil should not only be looked upon with a great deal of suspicion, but should be removed on the least onset of trouble. The most observing operators now, however, carefully work out the associated phenomena and when the nose is involved to a degree that it keeps feeding the overworked lymph nodes, and glands with foreign protein, the nose is first attacked, then later the tonsils, and experience proves emphatically that we will have much less of the socalled compensatory lymphangitis of the pharynx to deal with and hence will more quickly relieve the symptoms for which the procedure has been instituted.

Every operator has seen many cases, that following the removal of tonsils, the pharyngeal glands will remain entensely inflammed, sometimes even getting more so, in such cases it should be assumed that certain pathology somewhere along the chain has been overlooked.

### Another Case in Point.

Mr. D., has been a sufferer from neuritis and arthritis of certain joints. He had his tonsils removed with tempory relief, but soon the symptoms returned, associated this time with certain heart signs, and his former throat man being out of the city, he came to me. I found the tonsils very nicely removed, but there was present a very marked and active hyperplasia of the lateral pharyngeal folds, not however assuming the character of the compensatory tonsillar type but very active. An investigation of the nose revealed enlarged middle turbinates without evidence of pus. Assuming from experience that there must be focal possibilities in such a pathological correlation, I advised operation which was done, and on the right side there was evacuated a large quantity of pus and necrotic tissue completely hidden in the ethmoid. There followed almost immediately after the operation, an intense engorgement of the pharyngeal lymphatics, some pain over the cervical on both sides, and a lighting up of the neuritis with a rather marked acute exacerbation of the heart problem. This case has been comparatively recent, and although he is now very much improved, yet he has not recovered and he won't, until the overload of foreign protein has been removed from nasal and pharyngeal lymph streams.

This case has been very interesting to watch because during our observation, there have been two more, less acute exacerbations within the nose and pharynx, followed within a day or two with an increase in the distal symptom. I know we are on the right tract, but whether we have found all the links in the focal chain time will tell. In this case, as in the other, the tonsils were removed first. I feel the nose should have been attacked first, the tonsils would have helped as an additional barrier or another filtering station, so to speak, to dispose of part at least, of the extra foreign protein incident to the operation, later the tonsils could have been removed.

It has not been my intention to argue or to state that all cases of focal infection have there basic site in the nose. This would indeed be erroneous, but as experience grows the careful observer will note that so far as the nose and throat is concerned, it is very imperative that the exact status of the entire lymphatic system be noted, that oftentimes a careful observation of the pharyngeal glands will lead to the detection of nasal problems that might otherwise have been overlooked. And too, this same careful correlation of the lymphatic status will make towards more perfect surgical judgment in determining the proper link to be attacked first when there are two or more possible foci, and where with less information it might have been difficult to determine the original and the possible secondary area.

In most every case of acute suppurative Otitis Media, there is associated with it a distinct round cell inflammatory in filtration of the pharyngeal glands, undoubtedly due to the overload put on the lymph stream coming down from the ear, and draining into the lateral pharyngeal fold. In this instance to leave the pharynx alone, is to invite a clogging up of the phagocytic action of the cellular tisue, and to not only prolong the ear problem, but to allow possible foci to develop in the pharynx secondarily. The converse is also true, that where a suppurating gland or a greatly hyperplastic gland causes a reversal of the infected lymph stream, that such a problem in the pharynx in or around the peritubular ring, can produce secondarily an acute Otitis Media. Visualizing along this same line, it is not far fetched to argue that a stasis and a reversal of lymph current can take place in the larger trunks, coming from the nose to a degree that the natural lytic action in the Ethmoid can be interrupted or inhibited, and followed with the formation there of a possible focus. To determine the pathogenesis of these, several problems, can only be done by one thoroughly conversant with the histopathology of these special parts, and yet the exact status or plane of focal infections will be obtained only, when studies such as offered in this lymphatic hypothesis are worked out in detail, and then perhaps we will be able to give a definite prognosis when diagnosing the symptom syndrome incident to focal infections.

There is an unlimited field for thought along this line. However I shall conclude this paper with a brief resume of a few points I know are uncertain in the minds of some of my medical associates.

The question of stimulating the lymphatic tract to greater efficiency in a given case, wherein the clinical data at hand proves the same to be indicated. For instance, in a nose, suppurating Ethmoditis associated with an incipient sclerosis of the nasal mucosa. This case is subject to repeated attacks of acute coryza, sometimes associated with a slight headache, a slight fullness in the frontal region or perhaps a low grade tinnitus. All the symptoms fluctuating in severity as the lymphatic circulation is clogged or open. The problem in this case is to stimulate or to be more definite, to increase the specific antibody formation of the local cells, and through this to lower the toxic fraction in the bacterial molecule. By so doing, it is marvelous the immediate relief noted by the patient.

I know of no better means to produce this desired effect, than by the proper and judicious use of Iodine. Perhaps there is no one agent that has greater efficiency in the nose when used correctly, and that has greater untoward effect when used injudiciously.

Sometime ago, I experimented extensively with Iodine solutions in the nose, using from one to ten percent solution of the crystal in Glycerine, and I have come back to the 2% solution as advised by Dr. Owen, realizing that as my experience and observation increase, that the finesse is not in when to use, but how to use. A 2% solution of iodine can be used in a nose affected with any disease from a most virulent acute Rhinitis, to a most chronic atrophy and with uniform results. The finesse as I said, being in the amount and the situation used. In a lyphatic stasis, such as enumerated above, the iodine should be applied along the lower border of the inferior turbinate, for about two thirds of its length, and a little friction used in its application, also a very small applicator with the solution just on the end applied and rubbed just under the middle turbinate. In this instance to apply too much, will induce a too marked reaction, produce a definite inflammation and defeat the purpose of the treatment, namely the increase or preponderance of specific antibodies.

Again in acute rhinitis, the solution should very gently and in very small amount be applied just to the anterior extremity of each inferior turbinate. So on down the line, each specific problem has almost a specific way for using.

In more general terms then the iodine stimulation is best acquired if applied in sufficient amount and suitable force to excite a definite glandular activity without exciting a positive cellular infiltration. This desired result can not be obtained when the iodine is smeared in the nose irrespective of the objective desired.

The proper use of iodine becomes then our greatest armament in the follow up treatment of nose and throat cases operated upon for focal infections, in which although the foci has been removed yet there remains numerous infected lymph glands. These if properly treated, will subside, but if permitted to go uncared for, might go on and eventually turn what might have been a victory into a defeat. Early in the paper I commented on the fact, that the mucosa of the septum due to its stretched out character, was less poorly supplied with lymphatic glands than the lateral wall. If this be so, then we are warranted in assuming that if the tonsils are directly connected with the trunks from the septum, they would more often be secondarily infected from septal operations than from operations on the turbinates. Any operator who has had much experience in nasal surgery, will bear testimony to the more frequent acute tonsil infections following resections, than following operations on the ethmoids or turbinates. Yet there is much more pus in the nose following the latter cases, than in resections.

In conclusion, I want to emphasize the fact that the lymphatic system supplies the material for repair, removes waste and by mechanical filtration, phagocytic and lytic action of its lymph, constitutes a defense function, yet frequently the infection passes through the system undetected to become manifested in a distant part, and the point in question is, for the observer professing skill in diagnosis, to be thoroughly familiar with the potential possibilities of every portion of the lymphatic chain involved, and to avoid the danger of empirical practices.

### Discussion.

**Dr. W. L. Ross, Omaha.**—I want to suggest that the state society is a clearing house, and that a highly specialized paper, while perhaps it is not fully appreciated by the general practioner, is usually a means of keeping him abreast of the times; so that the doctor's suggestion that such papers are beyond the comprehension of the general practioner may be true; still there is a little tendency on the part of the specialist to present his best efforts only to the meetings of the specialists. I, for one, want to say it is of the highest benefit, that such papers are presented to the general meeting, to keep us all abreast.

I want to suggest a method of reaching all the local foci of infection by the use of the X-ray. As yet, I do not know of anybody who has taken up that work particularly, aside from myself. We are generally severely criticised for being bold enough to suggest the benefit of the X-ray, in any of these infected sinuses; and yet I contend whenever you find a local focis of infection, it is a case for the use of the X-ray. It is administered in cases of carbuncle, which are greatly benefitted, and saves them from long suffering. I have frequently administered it in mastoiditis, and tonsilitis, because you reach all the lymphatic channels, and glands of the head and neck, and I believe it is an agent that should not be ignored.

**Dr. W. P. Wherry**, in closing the discussion following the reading of his paper, simply said:

I have nothing to add. I appreciate the many kind words of Dr. Dayton, and appreciate the opportunity of being here.

## Bone Surgery, With Reports of Cases.*

Chas. H. Breuer, M. D., Lincoln.

Vicious union is defined as occuring when the deformity following the union is such as either to interfere with the functions of the limb or produce disfigurement. Both vicious union and nonunion may produce interference with function, especially if they occur near the joints or in the continuity of long bones. Nonunion may produce a flail joint, or weaken the limb by producing pain. In vicious union the deformity consist in angular displacement, rotary displacement, or shortening. In most cases we find that the displacement is angular, or that there is shortening. In fractures of single bones, the deformity is most frequently shortening, while in parts of limbs where there are two bones, as in the forearm or leg, it is angular. In one of the writer's cases, non-union and vicious union occurred both in the same limb. The tibia did not unite, and the fibula united in angular deformity.

The causes for delayed or nonunion may be divided into two main groups: Systemic and local. Among the systemic causes, we may mention the different dyscrasias and diatheses that interfere with nutrition, as alcoholism (1), malaria, dyscrasia hemorrhagica, tuberculosis, diabetes; also certain bone diseases, as osteomalacia, fragilitas, osteoporosis, rhachitis, scurvy, etc.; then different types of anemia, and chronic poisonings, as with lead, phosphorus, and the like.

For the purpose, the most important are the local causes, which are varied. In the first place, we may mention insufficient mobilization of the fragments, too much play interfering with the formation of the cortical callus, due to constant traumatization of the osteoblasts; incomplete apposition, where the bones are too far apart, or cavities form between the fragments; this often occurs near joints, where powerful muscles draw on short fragments of bone. Another frequent cause is the interposition of soft tissue, as muscle, fascia, or fat, between the ends of the bone. It has been shown experimentally that such interposition prevents the union of the fragments, and the phenomenon has been utilized by surgeons in plastic surgery on bones, where it has been desired to form a new joint or prevent ankylosis. Fatty tissues are the ones mostly used, as they are more apt to form new synovial membranes than other tissues. Thirdly, we may have interference with the nutrition of the part through injury to the nutrient vessel and nerves. Where the anastomotic circulation is feeble, we may easily get sepsis or sloughing, for when nutrition is interfered with, the tissues do not possess sufficient resistance to prevent infection.

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

Sepsis is a frequent cause of non-union on account of interference with the growth of bone-forming cells. Sepsis may be caused directly by the primary injury, or may develop later on. When sepsis reaches the periosteum and pus forms underneath this membrane, the periosteum may be detached from the bone and interfere with the nutrition of the latter, and then exfoliation or sequestrum formation will occur. A sequestrum may form at the ends of the fragments, and produce cavities between the ends of the bones.

It happens sometimes that the patients refuse to remain quiet, and by moving around in the bed, or even getting up from the bed, disturb immobilization and apposition to such an extent as to cause non-union or vicious union.

The causes of vicious union are numerous. The factors mentioned above operate also in these cases, such as insufficient retentive apparatus or dressing, the impossibility of immobilization or apposition on account of close proximity to a joint, or too thick a cushion of fatty tissue in corpulent subjects. Faulty extension or improper position in bed, or too early use of limb, either too early an attempt to support the body weight on a leg, or too early an attempt to use the arm, may be mentioned as causes.

Diagnosis may seem on first thought to be quite simple,but in some cases that come to us late, it may become very embarrassing, especially where the deformity is close to a large joint, as the hip or shoulder joint. Non-union in long bones is easy of recognition for we can feel motion in the wrong place. But, the ends of the fragments may be bound down by strong fibrous bands, and no motion can be elicited. Measurement will show deformity in vicious union, but will not always reveal non-union. The best test is an x-ray picture taken in different places. By this method the diagnosis may be made quite accurate.

The treatment may be divided into two parts: prevention and cure. Prevention is for obvious reasons the most important, as when it is successful, it renders the other unnecessary.

In cases of accident, the most important thing is to immobilize the limb to prevent traumatism to the tissues around the fracture, arrest hemorrhage if there be any, and to transport the patient to a hospital or to his home. In all cases, the hospital, if possible, is always preferable, as here, x-ray apparatus is accesible, and everything is ready for operative intervention if found necessary. If there be a compound fracture, there should be no handling of the fragments until the patient is in the hospital, except in cases where it is necessary to arrest hemorrhage.

If the fracture occurs in the continuity of the long bones, far enough from the joint to permit of easy setting, it may as well be set at once on the scene of the accident, and some simple retentive dressing, as a wire or gauze, splint, fracture box, or well-padded splints applied; but in all fractures near the joints, it is better to immobilize the limb temporarily by any retentive dressing at hand, and transport the patient to a hospital. In most cases, the prevailing method is to set the fracture by simple extension and manipulation in the usual manner, and putting on some retentive dressing, as a plaster of paris cast, splints, or extension. Where the fracture is near a joint, and powerful muscles draw on the fragments, it is necessary to use some kind of extension to keep the fragments in apposition, and to tire out the muscles. All these manipulations are described minutely in all works on surgery, and it is unnecessary to dwell on them here.

But in cases of compound, comminuted, or otherwise complicated fractures, in fractures near the joints, or in very obese subjects, where retention is not easy, the recognized treatment is now the so called open treatment. This is the only certain way in these cases to place and keep the fragments in true apposition; it is the only way by which we can be sure that there will be no soft tissues between the ends of the bones, and convince ourselves that there are no injuries to vessels and nerves.

The tissues adjacent to the fracture may be traumatized not only by the injury itself, and by subsequent handling, but also by the use of too strong antiseptics. These devitalize the tissues, often to such an extent that sloughing takes place and primary union is impossible. The best cleansing agent is sterile normal salt solution, and in some cases, peroxide of hydrogen which causes a good deal of foaming, thereby loosening and bringing up foreign particles as dirt, sand, pieces of clothing, etc., from the deep recesses of the wound, after which the salt solution will readily wash them out. Antiseptics also dry up the natural discharges of serum poured out by the tissues, which are far better as antiseptics and germicides than any artificial substance introduced by the attendent. But, in all cases, it should be provided that these discharges are easily carried away and not retained in the wound, where they will serve as irritants, and culture media for organisms.

After the wound is clean, the necessity arises for a choice of method for keeping the fragments in apposition. Bone is specialized tissue, and repairs only under the proper conditions; if not in good apposition, callus may not develop. Many surgeons prefer the use of bone-plates, wiring, and other internal means, and recommend external splints only in simple cases. The means of internal maintenance are numerous, as suturing with wire, catgut, silk, nailing, screwing; the use of ivory pegs, or of fragments of healthy bone from another part of the body in the form of plates, implants, and Lane's bone plates. Lane, Murphy Judd, Eisendrath, and numerous others are strong in the recommendation of internal methods of maintenance in all cases other than simple transverse fracture. Wire suturing is applicable only to small bones and to places where muscles do not interfere by too much tension. Under strict asepsis, the Lane plate gives more satisfaction than any other method. These plates are used very extensively in all parts of the world. The writer has used them very extensively, and with much satisfaction.

Autoplastic bone plates, originally described by Albee, are a very satisfactory method of dealing with this class of fractures. The technic is quite simple, consisting in the removal of a plate of bone, usually from the tibia. The best method is to use a special electrically driven saw, and with the same saw, make a groove in the fragments that are to be united. From the smaller fragments of the autoplastic plate, small pegs are fashioned, and driven through holes drilled through the plate and fragments. When Lane's plates are used, subsequent removal of the plates and screws is necessary. In case of bone transplants, these are absorbed, and a reopening of the wound is not required. It is probable, in the light of experimental work, that homoplastic plates, used at once while still alive, grow into place, like true grafts; while heteroplastic bone plates are not thus incorporated, but undergo absorption and replacement. Lane's plates, however have the advantage of being stronger and more secure, and holding heavy fragments safely in place. However, in both bone-plate and steel plate repairs, it is advisable to maintain position by external retention, as splints or casts. Implants especially are not rigid enough to keep the limb in position, serving merely to preserve apposition of the ends of the fragments.

Ununited fractures have heretofore been treated by different expedients. The injection of blood between the fragments has been recommended, with the idea that it will organize and produce union. The rubbing together of the fragments, to freshen the ends, is also recommended. Bier's passive hyperemia, to stimulate reparative processes is mentioned. The correction of the systemic cause is most important. At present, most of these cases are being treated by the open method.

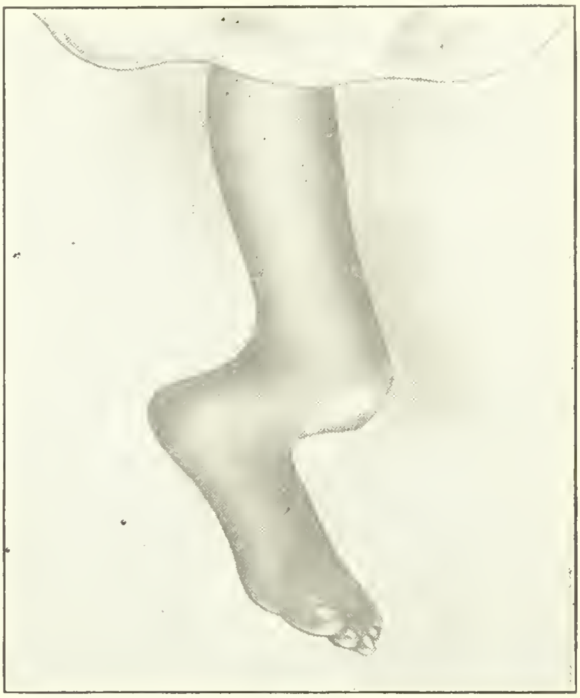
In vicious union with deformity, the only recognized method at present is the open method. In years past, surgeons were wont to rebreak and set anew such vicious unions. But in rebreaking it is very difficult to control the line of fracture, and it often occured in undesirable locations. Even when accurately fracture, resetting presented difficulties, as in the new position, the ends of the fragments would not fit. The orginal difficulties in the way of apposition were apt to be repeated at the resetting.

The treatment of non-union and vicious union is essentially the same, differing only in detail. The indication is to secure absolute apposition in proper position and maintain it until union takes place.

The most important consideration is strict asepsis. After the field of operation has been made aseptic by the usual methods, with scrubbing and tincture of iodine, the wound should not be touched any more, even with the gloved hand; everything should be done with sterilized steel instruments; all suture material should be handled with instruments only, and not touched by hand. The incision should be made in such a place as to do the least injury to vessels and nerves, and at the same time to secure the best possible exposure. The ends of the bones should be well exposed, and if held together by fibrous bands, should be separated. With a narrow saw, or a Gigli wire saw, the ends should be accurately sawed off so that they will fit in the corrected position. The two fragments are held together by special forceps until the plate is fitted, the plate should be twisted or bent to fit the surface of the bone, holes drilled, and screws inserted. The soft tissues should be accurately replaced and sutured, and the wound dressed with great care in asepsis. The holes for the screws should be a little small, so that the thread of the screw will cut a little to secure a hold. External retention should be applied. In spiral or oblique fractures, nails or screws without plates, or wiring may be used.

In using bone implants, the same technic is used for holding the bone in apposition. In using the saw, sterile salt solution should be sprayed on it to keep it cool, and the the greatest care should be used to prevent all traumatism which will destroy the vitality of the implant. Hemostasis must be very careful to prevent the formation of hematomata. In closing the wound, all tissues must be carefully replaced to prevent the formation of cavities, which might fill up with serum or blood and become starting points of infection. Skin sutures had best be subcutaneous, as the drawing of the suture through the skin may cause infection, the complete sterilization of the skin being almost impossible.

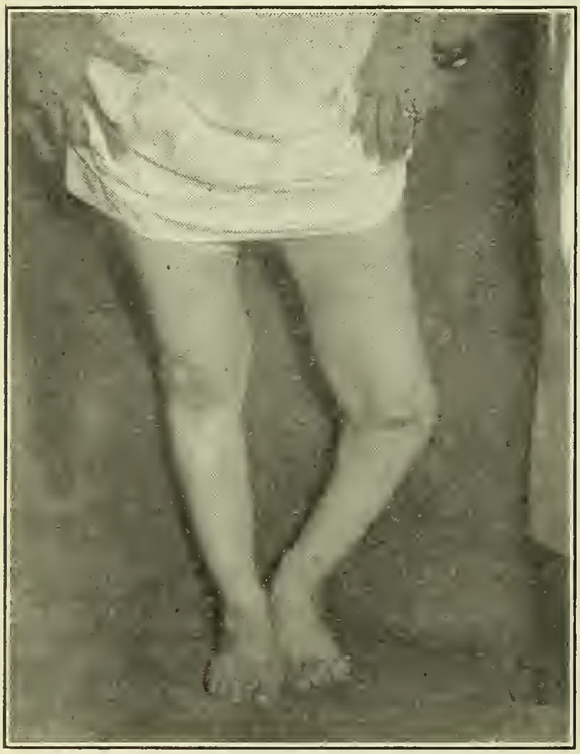
Case 1. Miss A. M., 15 years old, presented herself for the correction of vicious union of the bones of the left leg. She was in good health, and knew that an operation would be required. Her leg just above the ankle was bent backwards at a right angle. The leg was four inches shorter than the other. At the age of 3 years she sustained a fracture of the leg, which was set; the leg was straight, but about an inch short. In about three months she began to walk, and the leg began to bend, and in a year it was at a right angle. Then she had an operation performed, the nature of which she did not know, nor did her brother who came with her. But when she again began to walk, the leg bent again, and remained so till she was 15. After sterilizing the leg in the usual manner, I made an incision just in the middle of the tibia, and another just over the fibula. On retracting the soft tissues, I found the tibia ununited, and the ends of the fragments crossed an inch from the end. The ends were rounded and produced small tubercles, plainly visible in the illustration. The fibula was united, but bent at a right angle backwards, as it had been forced to carry the weight of the body. I separated the fragments of the tibia, and sliced off a fragment from each end with a Gigli saw. I was compelled to remove about half an inch from each end in order to bring them into apposition, as the soft tissues were much too short. The fibula was sawed across, and the fragments apposed in the same way. I stretched the tissues as much as possible, but nevertheless, an inch of shortening resulted. Then I put one Lane's plate on the tibia, and one on the fibula, and a 10-penny nail diagonally through the ends of the tibia. Everything was done with instruments only, and nothing was touched with the bare hand. The result was a leg an inch shorter than the other, but perfectly straight, having gained three inches in length. One small



Case 1.

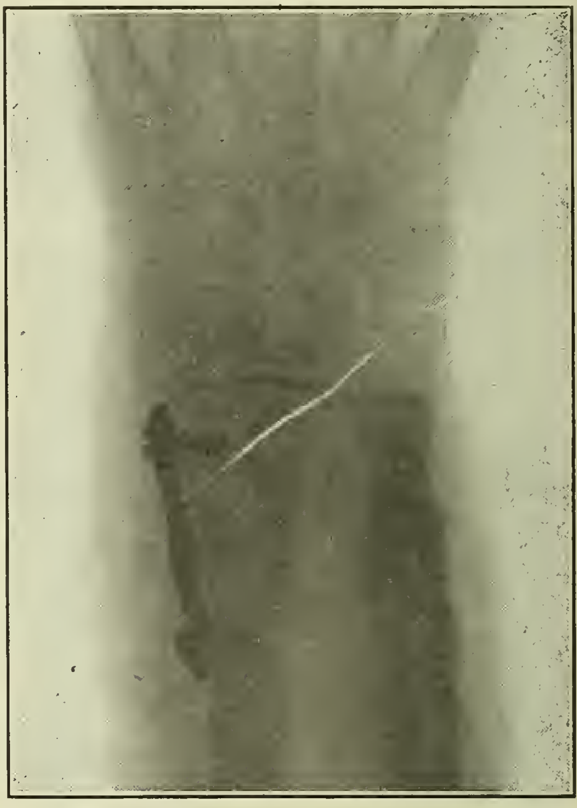
stitch abscess developed, but did no harm, healing in two days after the removal of the offending stitch. The plates were removed after three months.

Case 2. Miss M. M., age 22 years, perfectly healthy, had the left leg below the knee bent inwards at such an angle that it showed plainly through her dress. She had a fracture about three years before, and after she began to walk, about two months after injury, the leg began to bend until it reached the present position. X-ray plates showed curvature of the tibia only, about three inches below the upper end. The case was one of vicious union. An incision was made over the most prominent part of the tibia anteriorly, a little to the inside, and good exposure made. The bone was healthy. A wedge-shaped piece of bone was sawed out of the outer side at the angle, through about three quarters of the thickness of the bone, and of such shape that when the bone was straightened, the surface of the ends would be in a complete apposition. The last quarter of the thickness was broken, to preserve to continuity of the periosteum. Two Lane's plates were put on the bone, and the incision closed. The leg healed completely in six weeks, and the plates were removed two months later. The leg is perfectly straight, and half an inch short. Function is perfect, one year after the discharge of the patient.



Case 2.

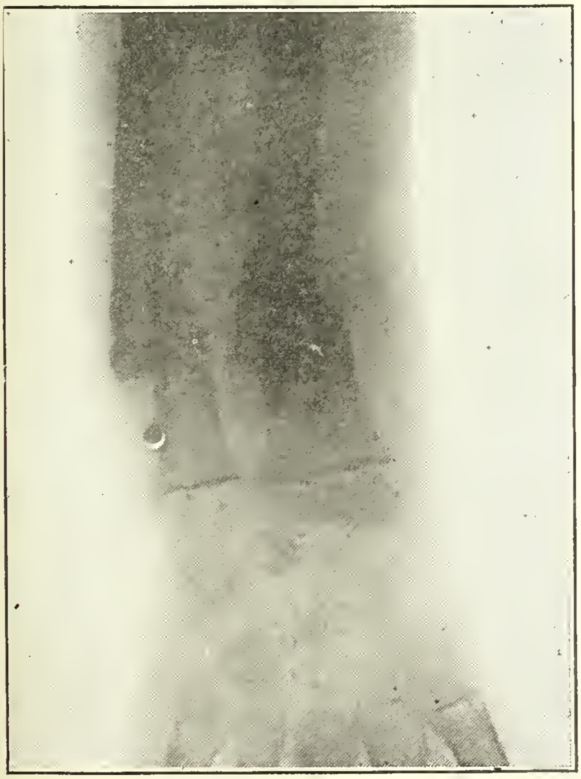
Case 3. Rudolph K., 6 years old, perfectly healthy, was brought in, with a deformity following a fracture of the forearm just above the wrist. Twenty-two days before, he had sustained a fracture, which was healing with deformity. The x-ray showed overriding of both bones, and one of the bones was splintered at both ends. An incision was made on each side of the forearm, separately for each bone, and after separating the fibrous union of the bones, it was possible to straighten the forearm to secure coaptation of the bones, only with difficulty. The end of the bones were freshened, as they were already rounding off. A Lane's plate was put on the radius, but the ends of the ulna were so splintered that it was impossible to insert screws; so the splintered ends were tied and sewed together with catgut. The radius alone held both bones in good apposition. The wound was closed in the usual manner, and splints applied. Everything was done with instruments, and



Case 3. Immediately After Plating.

nothing was touched even with gloved hands. The bones united completely in five weeks, and a month later the plates were removed. The arm is now perfect, and not even the x-ray shows any sign of fracture.

Case 4. Albert S., 15 years old, was brought in by his father. He was of stunted growth, walking with a crutch, and one leg was flexed to such an extent that he could not step on it at all. I found two discharging sinuses in the region of the great trochanter. An x-ray plate, after a bismuth injection, showed an advanced stage of hip-joint suppuration. The head of the femur had almost disappeared and there were numerous sinuses about the bones and joint. A T-shaped incision was made over the great trochanter, and the numerous sinuses were followed up, and injected with Beck's bismuth paste, colored lightly with methylene-blue, so that they could be more easily followed. I found the head of the femur sloughed off, and the bone badly damaged clear through the great trochanter; the acetabulum was badly damaged by necrosis. I removed the head of the femur on a level with the lesser trochanter, and gouged out all the diseased bone from the acetabulum, a considerable opening into the pelvis resulting. I then fastened what was left of the femur into proper position by means of a Rainey splint, which is made of two half-troughs, of boards placed in such a position that when the legs are put in the troughs, there is a slight abduction of both thighs. These troughs are fastened together by transverse slats. This splint makes it easy to transport the patient. The healing took three months, but was quite satisfactory. The large cavity from which the head of the femur had been removed, filled in with fibrous tissue, which held the upper end of the femur quite solid. All suppuration stopped, and all sinuses healed up. The leg was straight and movable, but three inches short; the patient could walk without crutches. The false hip joint was sufficiently flexible to functionate in walking.



## Pelvic Conditions Producing Bladder Symptoms.*

Max Emmert, M. D., Omaha.

The bladder, being a sensitive organ, responds quickly to a slight stimulus. Under normal conditions, as it fills with urine, there is produced a stimulus to the nerve endings in the bladder wall which causes an involuntary contraction, forcing a few drops of urine through the internal spincter into the proximal end of the urethra, where they produce the stimulus which results in a conscious desire to urinate.

The act of urination therefore depends upon two main factors, namely: (1) The pressure within the bladder which is produced by the tonicity of the muscular wall plus the quantity of urine and, (2) the sensitiveness of the nerve endings in the bladder and the proximal urethra. Any disturbance of this balance may give rise to bladder symptoms.

In certain pathological conditions of the female pelvis the urinary symptoms are so pronounced as to divert the attention of the attending physician from the true to false etiological factors. The most prominent of these symptoms are (a) frequent urination; (b) pain in the bladder; (c) painful urination; (d) feeling of insufficient emptying of the bladder after urination and (e) a feeling of weight in the vagina which is relieved by urination.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

My purpose in this paper is to call attention to a few of the most common pelvic conditions which produce symptoms of disease of the urinary tract.

I. The most frequent causes of these extraneous symptoms are displacements of the uterus either in a retro position or prolapsed condition. With the normal supports of the uterus weakened or destroyed, the uterus drags upon the bladder through the utero-vesical ligaments, which are not true ligaments but simply folds of peritoneum enclosing loose bands of connective tissue. However we know that traction upon any part of the abdominal peritoneum is productive of pain. An example of this kind is illustrated by the following history.

Mrs. N. aged 59. Multipara complained of "Falling of the Womb." For ten years she had suffered from symptoms of prolapsus uteri. Five years ago she had lost voluntary control of urination. This was regained later. For the past year her chief complaint had been frequent urination and a burning sensation during the act. Examination revealed a relaxed perineum, prolapsed uterus but no cystocele or prolapse of the bladder. Urinary findings were negative.

In this case the urinary symptoms were produced by traction exerted on the bladder through the utero-vesical ligaments. When the uterus has been separated from the bladder, because of rupture of these ligaments the urinary symptoms are less marked or totally absent.

Another case of the same class, but with a different basis for symptoms, is exemplified by the following history.

Mrs. C., aged 45. Multipara complained of "Distress in the Bladder." For several years she had suffered from pain in the bladder and a frequent desire to urinate which desire was not relieved by voiding. When in a prone position she felt comfortable. Examination revealed a relaxed perineum, partial prolapse of the uterus and a large cystocele.

In this case the cystocele was the chief cause of the symptoms. When in the erect position it produced a constant desire to urinate, because of the rapid filling of the cystocele pouch with urine. The act of urination never completely emptied the bladder consequently the pouch rapidly filled to the point necessary to produce the stimulus. In the prone position with the accompanying relaxation, the bladder would fill to the normal extent before producing a desire to urinate. Many of these patients soon learn that, by pressure with the finger upon the cystocele pouch following urination, they can empty the bladder more completely and thereby obtain relief for a longer period of time.

II. There are a number of tumor formations in the pelvis which, by their mechanical action of traction and pressure, produce symptoms of bladder irritation while the symptoms due to their position and involvement may be of secondary consideration to the patient.

Mrs. H. C., aged 36. Nullipara complained of "frequent urination and pain in the lower left abdomen." She gave the following history. Since the age of eighteen she had suffered from periodical attacks of sharp pain in the lower left abdomen. For several months her menstrual flow had been markedly increased. During the past month her chief cause for complaint had been frequent irritable urination. She would void every few minutes both day and night. Cystoscopic examination of the bladder and a detailed examination of the urine were negative. A mass, the size of a small orange, was easily palpated in the region of the left ovary. The removal of this adherent cystic ovary relieved all of the urinary symptoms.

III. Among the other pelvic conditions causing bladder symptoms are salpingitis with pus formation and tubal pregnancy. With these conditions, however, the bladder symptoms are of secondary consideration. Practically all pelvic conditions which cause adhesions will be productive of bladder symptoms sooner or later.

A combination of the above mentioned causes may produce bladder symptoms as is strikingly illustrated by the following history.

Mrs. S. aged 47. Nullipara complained of "frequent desire to urinate and pain in the bladder." About six months ago she began to suffer from a pressure on the bladder which caused a frequent desire to urinate. At that time it was possible for her to void only a small amount of urine which failed to give relief. She would have severe pain over the bladder on awakening in the morning. Ten weeks ago she noticed a mass in the lower part of the abdomen. Operation revealed a large cystoma of the ovary, fibroma uteri, and chronic pelvic inflammatory disease with adhesions.

IV. A very interesting case came under my observation a short time ago.

Miss M., aged 26, complained of "irritation after urination," and gave the following history: For several months she had suffered from a burning sensation which she described as being located at the urethral orifice. This irritation occurred at times between urinations but was most pronounced at the termination of the act and would remain for about one-half hour. She noticed that the distress was especially acute after she had been on her feet for several hours. Examination of the urine was negative but examination of the external genitalia revealed a congested cliteris with slightly adherent prepuce and considerable smegma in the folds of the labia minoris which were also inflammed. All symptoms cleared up after freeing the prepuce and treating the remaining parts with antiseptic solutions.

These few cases demonstrate the necessity for not only a complete anamnesis, but a careful detailed examination of the patient. Many women are allowed to suffer for years because a diagnosis of bladder or kidney trouble has been made from the history alone. These patients should be given the benefits of a complete examination which will usually reveal the true cause of the bladder symptoms.

603 Brandeis Bldg.

## The Stay at Homes.

I. N. Pickett, M. D., Odell.

It is to be regretted that at the last session of the Nebraska State Medical Association, some further action, regarding an organized assistance of those of our members who are so fortunate as to be doing or will be doing service in the Armies and Navy, now being marshalled for the tetanic struggle now at hand, was not discussed.

I believe at the 1917 session there was a sort of a "gentlemen's agreement" arrived at between the Stay-at-Homes and the volunteers of our profession, that during absence of the latter, the former was to contribute or return a certain percent (33⅓) of the proceeds from the practice belonging to the Medical Reserve Corps. This proposition was I believe offered by those who for valid reasons would remain at home, while the volunteers equally magnanimous asked for nothing but service. This plan of comity was evidently adopted at the time by reason of fact that there was nothing offered that seemed any better and it was being discussed and adopted in many places through the country. The plan has proven impractable for the fundamental reason that the practice of medicine is not a transferable asset. Dr. Brown may advise his clientele, that during his absence while in the war, that Dr. Smith (who is in sympathy with this plan) will attend to its wants. But an unknown number of Dr. Brown's patrons will go to Dr. Jones who not only is a "slacker but a profiteer" and consequently is not in sympathy with the co-operative plan. I know of no income from any calling in life, that is so dependent on the personal equasion as that in our profession.

Assuming then that the proposed plan adopted at the 1917 session has proven unsatisfactory it has occurred to me that other plans are worthy of consideration, one of which I wish to submit.

First I wish to start with the premise that relentless circumstances has thrust upon us a duty that is as wide as our nation, and as profound as our love for democracy. A duty that calls for individual sacrifice from every man, woman and child in our country. Every race of humanity is now contributing to the greatest catastrophe that has ever visited this terrestrial ball. Experts in every department and branch of science are being drafted to devise ways and means to develop some unheard of method to destroy—to kill. International laws have been relegated to dead past, and the slaughter still goes on with a profligacy that knows no bounds. Duty? The doctor who cannot see a duty to his country under the present circumstances is unworthy of the name doctor. Fortunately an antithesis, born of patriotism, love of justice and humanity exists. Out of this damnable Prussian made catastrophe, rays of light and glory are eminating as a result of a true conception of civilization, culture and humanity. Never before have the forces of conservation been so numerous or on such a stupendous scale as at present. Never have home comforts followed so closely the drum and bugle; thanks to the Y. M. C. A. and Knights of Columbus. Never were the Angels of Mercy so numerous or so close to the firing line. These benevolent organizations have but to indicate the amount of funds needed to carry on their special work and while this is so far the only money sacrifice that has been asked, the amount is always over subscribed. Nebraska exceeding her apportionment by 56 per cent, and in order to intimidate these benefactors of mankind our enemy, The Kaiser sinks Hospital Ships, bombards Base Hospitals, kills Red Cross Nurses and Sisters of Charity.

The Nebraska State Medical Association, takes a pardonable pride in the fact that (as stated to me) of the 1065 members, more than one in every three was or would soon be in service of our country. Now it is with the object that the foregoing somewhat prolix statements are made, to impress and bring home to the Stay-at-Homes the individual question of duty we owe to those who are doing their bit, and fighting to perserve privileges and comforts of the past and hopes of the future. Those of us who may be classed as superannuates, physically defectives, or from other valid reasons are forced to remain at home and pursue our calling in security amid our accustomed comforts, must ever remember that going to war is an individual sacrifice of all that is held sacred by peace loving man. It is the surrendering of comforts, security, social and family ties, in exchange for the hazards of sanguiniary conflicts, and hardships.

It will be impossible for those of us who Stay-at-Home to make any contribution or sacrifice that will commensurate with the patriotic service being rendered by those of our members who are at the front. Yet who among us is so indifferent or dead to the sense of duty that we cannot show some evidence of our appreciation of the services being freely given by the members of our profession, by doing our bit in a material way towards helping them or their dependents during their absence.

Assuming that the Stay-at-Homes are not only willing but anxious to be of some assistance in a patriotic and professional way, the question arises, what is the most practical and effective method of rendering such assistance.

A scheme is being advocated by the Gage County Medical Society, (Dr. Curry being credited with the initiative) whereby 20 physicians including the local members of the Medical Reserve Corps voluntarily obligate themselves to pay ten dollars per month into a fund for the benefit of each man in the service from this county. This scheme is both good and bad, and I believe impracticable. It is good because it contains the basic idea of cooperation. It is bad because it requires the M. R. C. man who has made the greatest sacrifice of all to make an additional sacrifice to this fund, a requirement that I cannot subscribe to. If there was but one in the service from this county $10.00 per month, or $120.00 per year it might not make much difference, but if there were 10 in the service from this county, $100.00 per month or $1200.00 per year would make a great difference. I believe the salary of a commissioned lieutenant is but $2,000 a year. And I doubt if the average practitioner's annual net income will amount to $1,200. This proposed fund should be created, only by those who remain at home, as the volunteer who holds a commission has already made a sacrifice far beyond anything possible for us Stay-at-Homes. Another objection to this proposed plan, is that the creation of a local fund by the local members, creates an unnecessary hardship on the county or district society in which the fund is created. In conversation with a physician whose name and location I cannot now recall, he informed me he was from the region embracing three counties in which there were 15 physicians, 8 of whom were members of the Medical Reserve Corps. I believe that a large majority of the M. R. C. men are from the rural districts of the state. I have used the above two examples to emphasize the necessity of a state wide cooperation.

It seems to me that this assistance could be more effectively and equally accomplished through a cooperative contribution to a Nebraska State Medical Association War Gift Fund. I suggest this organization because its membership embraces more than 66 per cent of all the physicians of the state, and more than 33 percent of its members are now or soon will be in the service of our country. I would designate it WAR GIFT FUND because in conversation with a prominent member of the M. R. C. he was afraid it might be regarded as charitable donation to the members, which would be erroneous. It should be regarded by both donor and recipient as a gift, a token of appreciation for services not only rendered our flag, but maintaining the sacred traditions of our profession. It would simply be doing our bit, when everybody should do something.

The proposition I believe worthy of consideration, is that each Stay-at-Home in active practice contribute to this War Gift Fund the sum of $20.00 per month during the war, and for 60 days after Peace treaties are signed by the belligerents. This fund so accumulated to be prorated regardless of rank and paid over to all physicians of the state holding commissions, or to their legal representatives. The fund to be placed in the hands of some one to be designated by the Board of Councilors, of the Nebraska State Medical Association, and who should be required to keep a just and accurate account of all incomes and disbursements, and submit a true statement of the Fund to the Board of Councilors as required by that body.

In order to expedite this state-wide cooperative plan, I wish to request those who are sufficiently interested, write me stating approval, disapproval, or offering suggestions for a better plan. If a sufficient response is made I will take the matter up with the proper officers of the N. S. M. A. for further action. Do not forget to state the amount you wish to contribute to the Nebraska War Gift Fund. I am willing to give $240.00 a year during war or $20.00 per month, for this fund, as a slight token of my appreciation of services being rendered by the physicians of Nebraska, in fighting my battles at the front, and maintaining the sacred traditions of my profession. What will you give? Please answer.

---

### Osteopathy and Chiropractic

Many inquires have been made by physicians throughout the state as to the legal status of the osteopath and chiropractor. The following copies of the statutes governing the practice of these men together with an opinion by Attorney General Willis E. Reed will answer these inquires and prove interesting.

June 22, 1918.

Dr. J. J. Hompes, Secretary of Advisory Board to the State Department of Health, Lincoln, Neb.

Dear Dr.:

Answering your inquiry relative to the extent of the practice of osteopathy by licensed persons following that system of treating diseases will say that the practice of osteopathy and the practice of medicine differ greatly.

Osteopathy is defined by the Annual Encyclopaedia for 1900, p. 554, as:

> "A method of treating diseases of the human body without the use of drugs, by means of manipulations applied to various nerve centers, chiefly those along the spine, with a view to inducing free circulation of the blood and lymph, and an equal distribution of the nerve forces. Special attention is given to the readjustment of any bones, muscles, or ligaments not in the normal position."

The American School of Osteopathy at Kirksville, Mo., is the parent college of the system of osteopathy in this country, and the statutes of Missouri recognize osteopathy as a "system or science of treating human diseases," and declare such system or science not to be the practice of medicine and surgery, within the meaning of the act regulating the practice of medicine and surgery in that state. (Mo. Acts of 1897, p. 206.) The law of Nebraska, however, provides that surgery must be included in the course of study in any legally chartered school of osteopathy. (Revised Statutes of 1913, sec. 2794.)

In the schools of learning teaching medicine in its different branches, an essential part of the instruction is in teaching the nature and effects of medicines, how to compound and administer them, and for what maladies they are to be used. Without a knowledge of medical agencies, no person can be deemed equipped to practice medicine by any medical college; for these things lie at the base of the instruction given in such schools.

Osteopathy teaches neither medical therapeutics nor **materia medica.** Bacteriology is also ignored by it. It relies entirely on manipulation of the body by rubbing, pulling and kneading with the hands and fingers, for the treatment of diseases. Its theory is that a large number of ailments are due to irregular nerve action, and that by stimulating or repressing the nerve centers by manipulation they enable nature herself to right the evil. It does not administer drugs and does not profess to cure all diseases. When a case is presented requiring medication, the osteopath gives way to the physician. Services in kneading and manipulating the body are no more the practice of medicine than services in bathing a patient to allay his fever or the inflammation of a wound.

I am of the opinion, therefore, that an osteopath cannot lawfully prescribe or administer drugs of any kind or character, as such acts would constitute the practice of medicine and, under the law of this state, such person would be guilty of a misdemeanor and upon conviction thereof would be subject to a fine of not less than $50 nor more than $300, together with costs of prosecution, for each offense. However, surgery being one of the branches the osteopaths are required to know, under the law of this state, it would seem that they can practice this branch, but are prohibited from administering a drug; and inasmuch as one cannot safely practice surgery without administering a drug, as the law now stands they are not permitted to perform surgical operations without the personal supervision and assistance of a regularly licensed and practicing physician and surgeon.

Very truly yurs,
Willis E. Reed,
Attorney General.

## 2788—REVISED STATUTES, NEB., 1913.

### Chapter 27, Article VIII, Section 79.

Examiners in osteopathy.—The governor of the state is authorized and required to cause to be examined and licensed to practice all persons, citizens or residents of the state following the profession of osteopathy or desiring to follow the same, and for that purpose he is authorized and required to appoint for the term of five years five examiners from a list of three or more names to be submitted to him by the Nebraska Osteopathic Association; one of whom shall be appointed in the month of July of each year. The governor and such examiners so appointed shall be known and constitute the state board for osteopathy. The governor shall appoint a secretary of such examining board and treasurer thereof whose terms shall expire with the terms of such persons so appointed; and the governor shall appoint from time to time succeeding secretaries and treasurers of said board. The governor shall be president of the board, but the examiners so appointed shall elect one of their number to preside in the absence of the governor whose office shall be that of chairman of the state board of osteopathy. Each examiner shall hold office until his successor in office is appointed and qualified. The examiners shall be at the time of their appointment actually engaged in the practice of osteopathy in the state of Nebraska, and shall have been so engaged at least four years immediately prior to the taking effect of this article. The governor may remove, after due notice and hearing, any of the examiners herein provided for, for neglect of duty or other cause deemed sufficient by him, and in the event of the death, resignation or removal of any examiner the vacancy for the unexpired term of said examiner shall be filled in the same manner as other appointments are made. The secretary and treasurer shall give bond to be approved by the governor and in any such sum as the examiners may from time to time determine for the faithful performance of their respective duties. The examiners shall have a common seal upon which there shall be the words "Nebraska State Board of Osteopathy," and they shall formulate rules to govern their actions, and the chairman and secretary are hereby empowered to administer oaths. The examiners shall meet in the city of Lincoln at the call of the governor or the chairman in the month of July of each succeeding year, and at such times and places as the majority of the examiners may designate. Three examiners shall constitute a quorum and no certificate to practice osteopathy shall be authorized on the affirmative vote of less than three of the examiners. The secretary shall keep a record of the proceedings of all meetings of the examiners and a register of all applicants for certificates, giving the name and location of the institution granting the applicant the degree of Doctor of, or Diploma in Osteopathy, together with the date of such diploma and date of registration of the applicant or granting of the certificate. The records and registers of such board shall be prima facie evidence of all matters recorded therein.

2789. Section 80. License to Practice Osteopathy.—Fee.—Any person not licensed in this state before engaging the practice of osteopathy in this state shall make application for a certificate to practice accompanied by a fee of twenty-five dollars. Said application must be upon forms furnished by the secretary of the board and include:

First.—The name and residence of the applicants.

Second.—The date of applicants diploma and evidence that such diploma was granted on personal attendance and completion of a course of not less than three terms of nine months each in three separate years.

Third.—The name of the school or college of osteopathy from which said applicant is a graduate, which school must be in good repute at the time of granting such diploma: Provided, however, an applicant's certificate issued by a reputable school of osteopathy to a graduate of a reputable school of medicine, after attendance of two terms of not less than nine months each in two separate years or a twenty months' graduate from a recognized osteopathic college graduating previous to January 1st, 1908, may be accepted in lieu of the foregoing three years' requirement.

The examiners may in their discretion accept as the equivalent of any number of the second and third requirements, evidence of five or more years' reputable practice of osteopathy, provided such substitution be specified in their certificate. If the facts thus set forth and to which the applicant shall be required to make affidavit shall meet the requirements prescribed by the rules of the said board of examiners, the applicant shall be entitled to take the examination before such board of examiners as to his qualification for the practice of osteopathy, which shall include the subjects of anatomy, physiology, chemistry, toxicology, patheology, osteopathic diagonosis, hygiene and obstetrics, gynecology, surgery, principles and practice of osteopathy, and such other subjects as may be required by the board of examiners. If such examination is passed in a satisfactory manner, which must be on the basis of seventy-five of a possible one hundred percent, then the applicant shall be entitled to a certificate finding that he is entitled to a license to practise osteopathy in the state of Nebraska, which said certificate shall be signed by the chairman of the board and attested by the secretary, with the seal of the board affixed. Upon the presentation of such certificate of the chairman and secretary to the governor, the governor shall thereupon issue the license to practice osteopathy in the State of Nebraska as herein provided.

Any person failing to pass such examination may be re-examined at the next regular examination within one year from the time of such failure without additional fee: Provided, the examiners may in their discretion dispense with the examination in the case.

First.—Of an osteopathic physician duly authorized to practice osteopathy in any other state or territory or the District of Columbia, who presents a certificate or license issued after an examination by the legally constituted board of such state, territory or District of Columbia, accorded only to applicants of equal grade with those required in this state; or,

Second.—An osteopathic physician who has been in the actual practice of osteopathy for five years, who is a graduate of a reputable school of osteopathy, who may desire to change his residence to this state, and who makes application on a form to be prescribed by the board, accompanied by a fee of twenty-five dollars.

A special permit may be granted by the secretary to any applicant deemed by him eligible, but such special permit shall not operate beyond the date of the succeeding regular or special meeting of such examiners. In all of the above provisions the fee shall be the same as charged to applicants for examination. A certificate may be refused to any person convicted of felony or gross unprofessional conduct or to one addicted to any vice to such a degree as to render him unfit to practice osteopathy, and for like reasons the certificate will be revoked upon due notice and hearing.

In all of such cases provided for in this proviso the board shall make like finding as upon examination of an applicant and certify to the governor and if they find the applicant is entitled to a license as herein provided for, they shall certify that fact to the governor, whereupon the governor shall issue to the applicant a license to practice osteopathy in the State of Nebraska as provided for in this article: Provided, such license shall not authorize the holder thereof to prescribe or use drugs in the treatment of diseases, In all cases of examination and all proceedings of the board upon applications to practice osteopathy, the findings of the board shall be entered upon the secretary's record.

## CHAPTER 197.

### Session Law 1915.

Section 1. Chiropractic—State Board—Examiners.—The governor of the state is authorized and required to cause to be examined and licensed to practice all persons, citizens or residents of the state following the profession of chiropractic or desiring to follow the same, and for that purpose he is authorized and required within thirty days after this act shall take effect to appoint three examiners, no two from the same school, from a list of six or more names to be submitted to him by the Nebraska Chiropractic Association; one shall be appointed for one year; one for two years; one for three years; and thereafter every year the governor shall appoint one such examiner for a term of three years from a list of not less than three recommended by the Nebraska Chiropractic Association. The governor and said examiners so appointed shall be known and constitute the State Board of Chiropractic. The governor shall appoint a secretary of such examining board and treasurer thereof, whose terms shall expire with the terms of such persons so appointed, and the governor shall appoint from time to time succeeding secretaries and treasurers of said board. The governor shall be president of the board, but the examiners so appointed shall elect one of their number to preside in the absence of the governor, whose office shall be that of chairman of the State Board of Chiropractic. Each examiner shall hold office until his successor in office is appointed and qualified; said examiners shall be at the time of their appointment actually engaged in the practice of chiropractic in the State of Nebraska, and shall have been so engaged at least two years immediately prior to the taking effect of this act. The governor may remove, after due notice and hearing, any of the examiners herein provided for, for neglect of duty or other cause deemed sufficient by him, and in the event of the death, resignation or removal of any examiner, the vacancy for the unexpired term of said examiner shall be filled in the same manner as other appointments are made. The secretary and treasurer shall give bond to be approved by the governor, and in any such sum as the examiners may from time to time determine for the faithful performance of their respective duties. The examiners shall have a common seal upon which there shall be the words, "Nebraska State Board of Chiropractic," and they shall formulate rules to govern their actions, and the chairman and secretary are hereby empowered to administer oaths. Said examiners shall meet in the city of Lincoln at the call of the governor or the chairman in the month of July of each succeeding year, and at such times and places as the majority of the examiners may designate. A majority of the board shall constitute a quorum, and no certificate to practice chiropractic shall be authorized on the affirmative vote of less than two of the examiners. A license to practice chiropractic within this state shall be issued to the individual members of said board at the first meeting of said board, upon payment of the regular fee, as provided for in this act. The secretary shall keep a record of the proceedings of all meetings of the examiners and a register of all applicants for certificates, giving the name and location of the institution granting the applicant the degree of Doctor of Chiropractic, together with the date of such diploma and date of registration of the applicant or granting of the certificate. The records and registers of such board shall be prima faccie evidence of all matters recorded therein.

Section 2. License—Examinations.—Any person not licensed in this state previous to the taking effect to this act before engaging in the practice of chiropractic in this state shall make application for a certificate to practice accompanied by a fee of twenty-five dollars (25.00). Said application must be upon forms furnished by the secretary of the board and include: First. The name and residence of the applicant. Second. The date of applicant's diploma and evidence that such diploma was granted on personal attendance and completion of a course of not less than two terms of six months each, and after January 1, 1916, of not less than three terms of nine months each said course to be preceded by an educational training equivalent to that of a regular four years high school course. Third. The name of the school or college of chiropractic of which said applicant is a graduate, which said school must be a chartered institution in good repute at the time of granting such diploma. If the facts thus set forth shall meet the requirements prescribed by the rules of the said board of examiners, the applicant shall be entitled to take the examination before such board of examiners as to his qualifications for the practice of chiropractic, which shall include the subjects of anatomy, physiology, chiropractic, symptomatology, nerve tracing, chiropractic orthopedy, hygiene, principles of chiropractic, and adjusting, as taught by chiropractic schools and colleges. All applicants who shall correctly answer seventy-five per centum (75%) of all questions asked, and not fail to answer correctly sixty per centum (60%)of the questions on any branch of said examination, shall be entitled to a certificate finding that he or she is entitled to a license to practice chiropractic in the state of Nebraska, which said certificate shall be signed by the chairman of the board and attested by the secretary with the seal of the board affixed. Upon the presentation of such certificate of the chairman and secretary to the governor, the governor shall thereupon issue the license to practice chiropractic in the state of Nebraska as herein provided. Any person failing to pass such examination may be re-examined at the next regular examination within one year from the time of such failure, without additional fee. Provided, all chiropractors practicing within this state two years prior to the passage of this act, shall be granted a license as herein provided, without examination, provided that application be made within sixty(60) days after the taking effect of this act and accompanied by the required fee, as herein provided. And upon filing with said board a diploma from some chartered college of chiropractic, showing the completion of a residence course of study in said college of at least two terms of six months each in separate years. Provided, further, the examiners may in their discretion, dispense with the examination in case, first, of a chiropractor duly authorized to practice chiropractic in any other state or territory or the District of Columbia who presents a certificate or license issued after an examination by the legally constituted board of such state, territory or District of Columbia, accorded only to applicants of equal grade with those required in this state; or second, a chiropractor who has been in the actual practice of chiropractic for five years, who is a graduate of a reputable school of chiropractic of equal grade to those of Nebraska, who may desire to change his residence to this state and who makes application on a form to be prescribed by the board, accompanied by a fee of twenty-five dollars (25.00).

A special permit may be granted by the secretary to an applicant deemed by him eligible, but such special permit shall not operate beyond the date of the suceeding regular or special permit shall not operate above the date of the succeeding regular or special meeting of such examiners. In all of the above provisions the fee shall be the same as charged to applicants for examination.

Any chiropractor who has complied with the provisions of this act may adjust by hand any articulation of the spine, but shall not prescribe for or administer to any person any medicine or drugs now or hereafter included in materia medica, perform any minor surgery only as hereinbefore stated, nor practice obstetrics, nor practice osteopathy.

Chiropractic practioners shall observe and be subject to all state and municipal laws and regulations relating to the control of contagious and infectious diseases, sign death certificates, and any and all matters pertaining to public health, reporting to proper health officers the same as other practitioners.

A certificate may be refused to any person convicted of felony or gross unprofessional conduct, or to one addicted to any vice to such a degree as to render him unfit to practice chiropractic, and for like reasons the certificate and license will be revoked upon due notice and hearing before said board. In all such cases provided for in this proviso, the board shall make a like finding as upon examination of an applicant and certify same to the governor, and if the applicant is found entitled to a license, or if the board find that the certificate and license theretofore issued should be revoked, as herein provided for, the board shall certify that fact to the governor, whereupon the governor shall issue to the applicant a license to practice chiropractic in the state of Nebraska, or revoke the license theretofore issued, as provided for in this act. Provided, that such license shall not authorize the holder thereof to prescribe or use drugs in the treatment of diseases. In all cases of examiniation and all proceedings of the board upon applications to practice chiropractic, the finding of the board shall be entered upon the secretary's record.

---

Any change of address by members of our Association will be made on our mailing list from month to month when written notice of such changes have been received in this office.

---

Not until recently were we aware that there was an organized program for the germaninzing of America, much of it to be done by the inculcation in the minds of the school children of German ideals and by the teaching of the German language in the schools. One of their greatest papers in America declares that within a hundred years America will be a vast German empire through the process. In Nebraska there are eighteen districts from which the public schools have been driven out by the German schools in which all the teaching is done by German teachers. Of 379 teachers examined, 350 were German. Spanish should be substituted for German in our high schools. We will need it in carrying on our trade with South America republics whose markets we must invade when the war ends.

# THE NEBRASKA STATE MEDICAL JOURNAL

Published monthly by The Nebraska State Medical Association.

J. M. Aikin, Managing Editor..............Omaha
A. F. Tyler, Associate Editor..............Omaha

Committee on Journal and Publication.
F. A. Long, Chairman..............Madison
W. O. Bridges..............Omaha
B. F. Bailey..............Lincoln
J. M. Aikin, Ex officio..............Omaha

Subscription $2.00 Per Year. Single Copies 20c Each

All communications should be addressed to
The Nebraska State Medical Journal,
476 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. III. August, 1918. No. 8

## Semicentennial.

It was in June 1868 that the Nebraska State Medical Association was organized. The charter members were: G. C. Monell, R. R. Livingston, D. Whittinger, August Roeder, H. P. Matthewson, J. B. Adrews, J. H. Peabody, S. D. Mercer, N. B. Larsh, and J. C. Denise. These men, though called to their eternal rest, bequeathed their organization to the learning and wisdom of their successors in the medical profession. In the half century just passed, much good work has been accomplished and much remains for our thoughtful attention.

From that small beginning, our enrollment of membership today is 1112. Two years ago the best thought of the members of our organization proposed a plan for our official Journal, to be owned, managed and published by our association. The Nebraska State Medical Journal, just closing its second year, has been a stimulus to the activities of our medical association work, and organized effort. It is our own Journal, intended to acquaint the membership in the state of Nebraska with the work done in the several counties. All county society reports should be printed for the benefit of other county societies in organized work for serving mankind.

Our board of publication invites for publication reports from county societies, or clinical cases from individual members of our State Association.

---

The application blanks for membership in the Volunteer Medical Service Corps promised in the April issue of the Journal have been sent from the Journal office to the members of the State Governing Board. The delay in supplying them was unavoidable because of the press of work in our national office.

---

The Journal has been advised that examination of school children, with the adoption of health and sanitary measures is not limited to Lancaster and Douglas counties. We know that this is a fact, but could not publish reports that have not been written and submitted to our office. What we intended to say was that Omaha and Lincoln were the only cities in the state where a regular system of public school inspection had been adopted, and reported to us.

---

## General Gorgas.

The possible retirement of Surgeon General Gorgas from active service on the date of his 64th birthday stirs the medical profession with a desire that President Wilson will deem it wise to retain the services of our preeminently efficient Surgeon General, at least until the close of the war. The A. M. A. House of Delegates in session at our recent annual meeting in Chicago unanimously and with great enthusiasm endorsed that sentiment.

---

Operations in the base hospitals in this country are so numerous and varied that it becomes possible for every doctor in military service who has surgical ambitions to get an experience that in all probability could not be obtained elsewhere, and under the guidance and instruction of as good teachers as can be found anywhere. What is true in surgical work is also true in medical work, and, as many have remarked, medico military work offers the finest post-graduate course that it is possible to secure.—Indiania State Medical Journal Editorial.

---

The government has directed that all medical schools that can do so shall run continuously throughout the war with the distinct object in view of turning out medical recruits to fill the many places where they are needed. Medical teachers are considered to be on a par with those men who really have enlisted, and a movement is now on foot to give military recognition to the services of those teachers in medical schools who are found indispensable to the conduct of the schools and thus to the furtherance of war necessities.—Indiania State Medical Journal Editorial.

The old adage "bird of a feather flock together," is still exemplified in the attitude of certain Christian Science writers who regularly quote from that truth perversionist periodical called "Life." Those who distort the truth, no matter whether it concerns animal experimentation or vaccination so defiantly and illogically fought by "Life" or attempt to defend the idiotic assertion that disease exists only in the mind, readily find a bond of sympathy with each other. "Life," and the "Christian Science Monitor" should pool their interests, and they can save a good deal of money by running their issues from the same press.—Indiania State Medical Journal Editorial.

### Notice to Our Readers.

Our Journal is due on your desk the fifteenth of each month. Because of the congestion in railroad transportation matter, including the mail service, your copy may not always arrive on the date set. Your Committee on Journal and Publication are earnestly endeavoring to have all copy, both reading matter and advertising, in the hands of the publishers not later than the 25th of the month just preceding the pending issue. On your part, any copy not sent to our office in time for its page arrangement for that date will, if it appears in that issue, delay printing and mailing on date set.

Councilor district medical society meetings are recommended in our constitution and by-laws. That such meetings are practical and beneficial for educational and social purposes has been abundantly proven, during the past five or six years by our members, especially in the Fifth Councilor district. The Dakota-Cedar-Dixon-Wayne-Thurston County Medical Society meetings, are a splendid opportunity for medical education and cultivating the social spirit. The Journal suggests the initiation of other councilor district medical society meetings throughout the state. The absence of many of our members in war service, arouses our fraternal desires. This depletion of roll call members makes county meetings in certain localities a most discouraging undertaking, but stimulates our efforts to conquer difficulties.

### Voluntary Military Service.

The medical profession has responded nobly to the call for voluntary medical service in the Army and Navy. At the present time there is need for additional medical men for government service and some scheme must be worked out that will avoid the condition which was brought about in England early in the war, namely: the depletion of physicians from the civil communities. A number of schemes have been suggested for preventing this. Among them is a plan which has been suggested by the Nebraska State Medical Association and which has met with the hearty approval of our National Association. This scheme has been adopted by a large number of the councilor districts and is being worked out by the other councilor districts throughout the state so that within a comparatively short time we hope to have the entire state fully organized along this line. The plan in brief was described in a communication from the Nebraska State Medical Association War Committee in the July issue of the Journal. Briefly this plan is to have the councilor of the district act as chairman of the committee with one member from each county society in his district. This committee asks each physician living in the territory, whether he is a member of the county society or not, to sign a resolution stating that he is willing to accept voluntary military service. After this resolution has been signed by all of the physicians, when there is a call for men from the state, the local committee will then ask their proportion of physicians to appear before the proper authorities for physical examination and commission in the M. R. C. By this scheme the Councilor District War Committee determines the situation so that no community would lose its necessary supply of physicians. Under the voluntary system without any control there are instances where towns of a considerable population with a large surrounding territory have been deprived of all their physicians. We must not forget in our enthusiasm to enter military service that the civil community at home must be taken care of. We think that this Nebraska plan will make this possible and at the same time furnish the proper number of men for service in the Army. When the different councilor districts report on these resolutions, the names of the physicians signing them will be published in the Nebraska State Medical Journal.

This provision will have no bearing upon members of the profession, who may desire to volunteer and enter the service directly, as heretofore.

### System in Making Draft Examinations.

Much has been written about the examination of draft registrants and at the recent meeting of the A. M. A. a special session was devoted to the furtherance of the standardization of this work. Not much has been said of the organization of personnel, of the "machine," to facilitate the work of local boards.

It may not be out of place to sketch briefly, the plan evolved and pursued in Madison county, Nebraska, and which appears to fulfill the needs of a country community very satisfactorily. A group of from fifty to eighty or more may be called for examination in one day. The Physician Member of the local board requisitions two physicians of the county to assist, and the work of examination is divided into three departments, and is carried on in three rooms of the City Hall. (1) As registrants enter they are given numbers, 1, 2, 3, etc., and in the assembly room the registrant answers the four questions, signs his name, is weighed, measured, and his nose, throat and teeth examined, (the weighing and measuring being done by the chairman of the board, and the nose, throat and teeth examination is made by one of the physician assistants). (2) Eyes and ears are examined by another physician assistant in a separate room. (3) In a room with the requisite privacy and comforts, he is stripped and given his final examination. He is first asked whether he is all right so far as he knows, and if he answers affirmatively, not much time need be spent with him beyond noting his general physique, spine, limbs, hands, feet, testing for hernia, noting hemorrhoids, if any, exercising him and listening to heart and breath sounds. If he gives a history of any ailment more time must be taken to develop the actual condition, and for this purpose an examining table covered with clean palette is a necessity. As only about 20% of registrants complain of anything, the work can proceed rapidly, and from half a dozen to a dozen men can be stripped and ready for examination awaiting their turn.

Four clerks are used: One takes preliminary statement, a second for weight, measure, nose, throat and teeth, a third for eye and ear, and the clerk of the local board for the final examination.

F. A. L.

### Osteopathy and Chiropractic.

During the recent years there has been a wide development of osteopathy and chiropractic throughout the United States. In the state of Nebraska the osteopaths have been licensed to practice for a number of years. Only recently, however, were the chiropracts recognized as legal practitioners. Before they were recognized a large number of them were practicing throughout the state. There was apparently no way to make them quit this practice so they were allowed to continue. It was deemed wiser to have them practice under a definite statute than to allow them to go on without recognition. Due to this fact a statute was passed licensing the chiropracts in the state of Nebraska.

There have been many inquiries come to this office about the statutes of the practice of osteopathy and chiropractic. On another page in this issue will be found a copy of the statutes covering the practice of both of these specialties. The statutes do not permit either of these branches to prescribe drugs in any form. There has been called to our notice recently a number of instances where men of these branches are prescribing drugs and are even using opiates quite freely. We think that this matter should be called to the attention of the federal officers as well as the state and county officials in each district so that a satisfactory adjustment can be made.

It has long been our contention that there should be no legal recognition of the different branches of the practice of medicine but that all men who practice the healing art should be required to pass an examination on all fundamental subjects, which are essential to the intelligent treatment of diseases. These subjects should include anatomy, physiology, pathology, bacteriology, histology, materia medica, osteology, neurology, surgery, and physical diagnosis. If the applicant had passed a satisfactory examination in all these subjects and perhaps others that might wisely be added, he could go out into the state and practice medicine or surgery, the osteopathy or chiropractic being simply a branch of the practice of medicine. Under the present ruling many men are entering these lines of work who are absolutely ignorant of the fundamentals of anatomy and physiology. The Canadian government recently conducted an investigation throughout the province of Ontario. A full report of this committee will be found in a recent number of the Journal of the American Medical Association. It will also be noticed that men licensed under these acts allowing them to practice osteopathy and chiropractic are not admitted to the Medical Reserve Corps of the Army and Navy. It is to be hoped that in the near future some uniform method of examination will be adopted for the license of men applying for the practice of the healing art.

### Accepted Commissions and Service.

Up to July 1st Nebraska was credited with 380 physicians who had accepted their commissions for M. R. C. duty.

Those commissioned are not all immediately called into service. Our government considers the fact that men who are called to render medical service in a campaign, need special training to inform them of the military situation and of the plans and intentions of their commander, in order that timely preparation may be made for projected movements and operations. It is a common but erroneous belief that a physician can change at once from the civil to the military practice of medicine and surgery, except as he may serve in a base hospital. Our government through the war department provides instructors in the officers training camps who teach physicians to appreciate their duties as commissioned officers of the army. In our enthusiasm to go at once into actual campaign work, we sometimes become impatient and indulge in adverse criticism of our war department. Preparedness for military duty is no less imperative for our personal protection and efficiency in action, than is analogous training for troops before permitting them to go under fire in actual conflict.

In the June 1 issue of the A. M. A. Journal we find Nebraska listed as having 1565 physicians. Our State Medical Association enrollment to August 1st was 1112. Only two states—Nevada and Montana—have a higher ratio than Nebraska, of their physicians in the Medical Reserve Corps. The present survey by our Councilor District War Committees who are tabulating every physician in the state, and reporting to our State War Committee the list of eligibles for same, shows quite as many who are willing, yes desirous of volunteering, as have already been commissioned.

Yes, General Gorgas, Nebraska physicians, up to 50 per cent or more, if needed, of our membership, are coming when you call us. We understand that as the number of troops increase an additional supply of doctors will be required.

### Ideals Made Practical.

It was wisdom that led the committee of our government on Public Information to invite the leading editors in Mexico to visit the United States and learn for themselves what its feeling toward their people actually is. On their acceptance they discovered from mingling with us and hearing leading men set forth our motives in life, that the great and controlling spirit of our nation is unselfishness toward all peoples. They learned that our desire is to help them, to plan all for all, not all for self. That is the teaching on which our democracy was conceived, born and reared. Our present organized humanitarianism for every civilized nation in the world is the fruitage of that form of government. The present upheavel of the war sheds a new light on the vital and living power our plan of government offers, for uniting all liberty loving peoples into one common effort for the initiation and maintenance of the moral and civil rights of every nation.

It was upon this ideal that our medical profession established and maintains the American Medical Association. The practical value of our National Association for effective service in relief of sickness and prevention of diseases is past the experimental period. That long cherished idea is now recognized by our government as a dynamic factor, indispensable to the efficiency of our army and navy. In merited recognition of National Defense, extended to our Amerpractical worth the government Council of ican Medical Association the responsibility of organizing and passing on the physical and educational fitness of all the physicians in the United States for service in the army and navy.

Without the prestige of military authority our profession has shown by the application of sanitary rules for the prevention of diseases, the possible accomplishment of commercial enterprises which no other nation had been able to make effective. We have demonstrated that the application of our ideas on sanitation, in both civil and military life, decrease the death rate, and increase efficiency more favorably than any record by the best disciplined military forces in the world.

These are only a few of the obvious reasons for the unparalleled growth of the American Medical Association. The source of our strength and unity of our organization originate in the county medical society. It is there that a full and frank interchange of views among the members may secure such intelligent unity and harmony of their labors as will elevate and make effective the opinions of the profession on all scientific, legislative, public health, material and social affairs, to the end that the profession may receive that respect and support within its own ranks and from the community, to which honorable history and great achievements entitle it; and with other county societies form the Nebraska State Medical Association, and through it, with other state associations, to form and maintain the American Medical Association.

That these ideals, insisted as practical by their promoters, are rapidly gaining an acceptance outside of our profession is verified in the governmental recognition given to our efficiency in public health matters. The educational advantages to our professional brethren who have hitherto been uninterested or adverse critics of our organization, is evidenced by the increasing number desiring to become loyal members and workers with us.

### Necessity of Eliminating Drink.

As we analyze the facts in a scientific and medical way there can be no doubt of the injurious effects of alcoholic drinks on both the physical and the mental well-being of our population. There can be no doubt that the greatest single factor that we can control in the interests of the public health of the nation would be the elimination of alcoholic drink.

In the slow evolution of civilization many great wrongs persisted for centuries because people had become so accustomed to them that they were accepted as matters of course. They became so intrenched that it required either centuries of education or a revolution to extirpate or right them. Great epidemics and plagues were accepted as inevitable and as visitations of God. Government by autocratic power and divine right without the consent of the governed has been tolerated. Salvery with its horrors was defended. The unequal rights of women went unquestioned. Among these great wrongs too long tolerated, none has done more injury to mankind than drink. Events now are moving rapidly in the convulsions of a world war. Women have demanded and will obtain, as they deserve the world over, their equal rights. The course of events is writing the death warrant of autocracy and rule by divine right; and science and education should eliminate not only the plagues and epidemics, but also the curse of drink from the world.

I want to plead for the united action of the organized medical profession of this country to secure protection by law against the injury that drink is doing to our people, not as a political measure, but as the most important public health measure that could be secured. In this crisis when we and our allies are fighting not only for ourselves, but also for humanity and civilization, we must organize the entire nation in the most efficient possible way, and this cannot be done without eliminating drink. Each member of the medical profession as an individual, each county medical society, each state medical society should take an active part in the propaganda against drink, and secure national prohibition, not years from now but now when it is so badly needed and will accomplish so much good, not only for our boys in khaki and in blue, but for the nation in arm. And when it has once been done away with, it could no more be resurrected after the war than could slavery.—Arthur Dean Bevan, M. D., in his address as president of the American Medical Association, Chicago, June 11, 1918.

As president of the Association, of American Medical Colleges I desire to call the serious consideration of each county medical society to the fact that in order to do its duty it should furnish at least 20 per cent of its members for military service. This situation should be met fully and promptly by each county medical society. In order to prevent hardships to communities due to lack of medical service, and in order to prevent the crippling of medical schools and hospitals, no community and no institution, unless it is clearly oversupplied, should be allowed to furnish more than 50 per cent of its medical men. As far as possible the quota from each county should be filled by men under 45 years of age. If this is not possible men up to 55 will be taken. As fast as each county fills its quota of 20 per cent—and this should be done by each county within the next few months—the secretary of the county medical society should notify the secretary of the state medical association and the secretary of the American Medical Association of that fact.—"Science," June 21, 1918.

## Abstract.

### Visceral Symptomotology in Nervous Diseases.*

(Grave Dangers of Misinterpretation and of Unnecessary Surgical Intervention).

Dr. F. X. Dercum.

A physician accustomed daily to observe his patients from a single point of view is naturally in danger of acquiring a narrowed horizon. This danger can only be avoided if he keep in touch in greater or less degree with the other departments of medicine, especially with the great field of neurology. It may be that the symptoms presented owe their origin exclusively to the local conditions, or it may be that the latter form but a part of a much larger symptom-group. To assign to a special symptom its proper value at once becomes a matter of great importance. Both functional and organic nervous diseases may express themselves by visceral symptoms or by symptoms that simulate visceral disease. That great liability to error arises here at once becomes evident; error at times shared by the internist but more frequently by the surgeon. Perhaps this condition of affairs is not altogether the fault of the internist or of the surgeon. Neurologists have too frequently given themselves up to value speculations and, at times, even to metaphysical explanations.

Physicians are not wanting who deny to neurasthenia a separate clinical entity, who maintain that in so-called neurasthenia there is always some—often obscure and often undiscovered—organic disease, and that to say that a patient suffers from neurasthenia is equivalent to an imperfect or incomplete diagnosis. I have endeavored in my own writings to give clearness to the subject of neurasthenia by defining it as the fatigue neurosis. The exhaustion is evidenced by ready fatigue and the irritability by increased reflexes and associated changes. The point of importance for us to bear in mind is not to give to the local symptoms a value which they do not possess nor to forget the general condition with which they are associated.

Hysteria, on the other hand, is a neuropathy characterized by a pathological susceptibility to suggestion. Most important are the various local pains of hysteria. In spite of the fact that their nature and signifiance has long been recognized, they still lead with great frequency to surgical interference. I can truthfully say that I rarely have a case of hysteria admitted to my wards in which upon exposing the abdomen, I do not find the latter revealing the scars of one and often of many and repeated operations. The pains of hysteria are distinguished from the pains of visceral disease by the fact that they are purely superficial. If hysteria be suspected, the investigation of the symptoms must be made with special care, suggestion being absolutely avoided, or in a doubtful case the examination being made with the negative suggestion. If organic disease be really present, the negative suggestion will not dispel the symptoms.

In psychasthenia—a neurosis which is made up of two facts, namely a pre-existing neuropathy plus a superimposed nervous exhaustion, the picture presented may be very complicated. On the whole, however, symptoms referable to the viscera of such severity as to dominate the clinical picture are distinctly the exception. When present, they are of the same general character as those observed in neurasthenia and need not especially detain us.

In hypochondria, the neurosis characterized by a fixed conviction of illness—when such illness has no existance—the complaints of the patient may again lead to the erroneous diagnosis of visceral disease. That such patients frequently become the willing subjects of an unnecessary and a misdirected treatment need hardly be pointed out.

When we turn our attention to organic nervous diseases, a still more remarkable picture unfolds itself. It is an not infrequent experience in my clinic to meet with cases of paresis and of tabes in which exploratory operations have been performed, the patients having suffered merely from visceral crises, the result of sensory root involvement. The first step, I should say in conclusion, is always the prompt recognition of the underlying neurosis or of the underlying organic nervous disease as the case may be.

---

*Read before the Section on Nervous and Mental Diseases, meeting of the American Medical Association, June 12th, 1918, Chicago, Ill.

### Parke: Cesarean Section in Treatment of Eclampsia.

American Journal of Obstetrics, June, 1918.

1. Since pregnancy is responsible for the eclampsia, its termination by one method or another is indicated as soon as a convulsion has occured.

2. The interest of both mother and child are served by the same procedure-namely-early operation.

3. Each case should be considered on its own merits and that method of delivery adopted which best suits the case.

4. Delivery by the abdominal route is indicated in primipara where labor has not set in—or is not well advanced—where the child is living and viable and the nearer the child is to term, the stronger the indication.

Multipara at or near term—but not in labor—with rigid and high placed cervices, may well be included in this group.

5. The contraindications for the cesarean operations are repeated vaginal examinations, examinations continued over a long period, more particularly where the bag of waters has been broken; and, of course, where unsuccessful attempts at delivery have been made, and where there is any infective process in the birth canal.

6. Operations through the abdomen are attended with more risk than operations through the birth canal if done under unfavorable conditions, hence a suitable environment and a capable operator and assistants are a sine qua non for this method of delivery.

A. B. S.

Under the auspices of the United States Health Service there has been issued for general circulation, a very valuable report on the care of the baby. (Supplement No. 10). This report was issued under the direction of some of the leading physicians of the country. It is valuable as it does not attempt to instruct the mother how to treat a sick baby, but gives good advice as to how to keep the baby well. It lays special emphasis upon the importance of maternal nursing. Where a mother does not have sufficient milk, it advises mixed feeding rather than weaning the baby. The instructions for the care and modificatiion of cow's milk are excellent. It gives advise as to the clothing, bathing, and prenatal care. This valuable report may be procured from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 5c a copy.

H. M. Mc.

## GENERAL NOTES.

The manufacture of peanut oil has recently become an important industry in the South.

Iceland has excellent fisheries, among the best in the world, and her fishing industry is growing rapidly.

The newest hot water bottles are triangular in shape and made of crockery. They retain heat for twenty-four hours.

More than 15,000,000 gallons of turpentine are produced in the world every year, the United States leading all the other nations.

Cork, treated chemically to remove any resinous substance it may contain, and reduced to fine pellicles, adapts itself to use as a textile.

Two British scientists have decided that sense of smell is weaker in man than in lower animals because of the human practice of kissing.

In 1917 France produced an olive crop large enough to supply eight million gallons of oil and sixty-five thousand metric tons of oil cake.

For putting the finishing touches to concrete roads a machine driven by a gasoline engine has been invented in England for suburban and private use.

The discovery of a vaccine for curing and preventing malta fever, prevalent along the Mediterranean, is claimed by a French scientist of high repute.

Bureau of war-risk insurance of the Treasury Department announces that in the six months since Oct. 6. 1917, 14 billions of insurance has been written. This was taken by approximately 1,700,000 soldiers, sailors and nurses. The average amount applied for was close to $8,500, the minimum permitted by the law being $1,000 and the maximum $10,000.

According to a report recently made to the reichstag by Surgeon Gen. Schultze more than 2,700,000 wounded and sick men have been returned to the fighting front, and 692,000 soldiers have been discharged from the German army as unfit for further service. Surgeon General Schultze declares that the percentage of men discharged from the hospitals as fit for further service is very high, but the number of cripples at this time is about 98,000. With the exception of those killed the deaths in the army were from 1 to 1½ per cent of the wounded.

The ordinary stinging nettle has broken into the cloth-weaving business. Naturally we would not expect much of a weed with the nettle's reputation, yet nettle fiber is said to adapt itself to the weaving process. If the qualties claimed for it really exist, nettle fiber mixed with wool produces a soft fabric "hardly distinguishable from woolen, much cheaper, and more easily dyed." Whether or not this is altogether true, it seems reasonable enough to believe that the fiber would do excellent service in making coarse cloth and cordage, or an adulterate for flax and cotton.

During the civil war a great many more men died from disease than from bullets. Only 110,070 were killed on the Union side and somewhat less than 100,000 on the Confederate, while 250,192 died from disease on the Union side, and the number on the Confederate side is not known. We should keep in touch with our members at the front and in the camps. We should have letters from them and they in turn should have copies of our minutes and magazines forwarded, in which the special articles are published. They should never be allowed to feel that we have let them go or are losing interest in them. They are ours and we who for one reason or another are forced to keep the home fires burning, need not wait in our interest and attention until the boys come home.

We have previously noted that the right of the American soldier in peace to refuse a major operation involving general anaesthesia of appreciable risk of death has been suspended during the war. Considering that the healthy soldier is compelled, in war, to incur a very appreciable risk of death, it is held that a board of surgeons may compel submission to any operation that will with reasonable probability restore a disabled soldier to duty. This is entirely proper and we are somewhat surprised to note that a recent decision of the French Minister of War holds that a wounded soldier may refuse operation but that such refusal may be officially used to reduce future pensions to the basis of the probable net disability in case operation had been done. A recruit may also refuse an operation to remove disability existing before his mobilization.

In peace, officers are allowed quarters beginning with two rooms for a second lieutenant and increasing one room for each advanced grade. If quarters are not available commutation is allowed at the rate of S. QW. per room. In war, officers below the rank of major are allowed half of a tent, majors a whole tent, or a small room in barracks of some sort in most of the present cantonments. A recent bill, signed by the president, restores the commutation allowance for officers actually having families for which they are providing quarters, in addition to an allowance for heat and light according to season. Just how the latter will be arranged, has not yet been announced but it will probably be in accordance with army regulations. This means for the Medical Reserve, that 1st lieutenants will have an addition to their pay of $36, captains $48, and majors $60 a month, which makes the service still more attractive.

## STATE NOTES.

Dr. W. P. Haney, Omaha, has been ordered to Camp Greenleaf for training.

Major John P. Lord has been transferred from Fort Riley to the Base Hospital, Fort Des Moines, Iowa.

Drs. E. A. Buchanan, Grant S. Reeder, Grove H. Rathbun and Richard Van Meter of Fremont have entered government service.

Dr. LeRoy Crummer, of Omaha, is now instructor in cardio-vascular diseases in the Medical School at Camp Greenleaf, Ft. Oglethorpe, Ga.

Nance county with a society roll of nine has six doctors in our war service. Dr. Leo A. DeLanney of Belgrade, recently left for training camp work.

Dr. Leo Killian has orders to report at camp Deming on the 23rd and Dr. A. J. Cameron, of Herman, is to report at Ft. Riley on the 18th. Dr. Morris Nielson and wife entertained the physicians of the county in their honor before their departure.

The committee on Public Policy and Legislation of our Nebraska State Medical Association for the years 1919 is as follows: Chas. L. Mullins, Broken Bow, chairman; W. H. Wilson, Lincoln; E. T. Manning, Omaha; Leopold Phelan, Grand Island; Colonel J. M. Banister, Omaha; Joseph M. Aikin, Omaha.

S. F. Sanders of Holdrege, councilor of the tenth district, is attending the National Encampment of the Grand Army of the Republic at Portland, Oregon, from the 10th to the 20th of this month. Before leaving the state he personally visited every county in his district in the interests of volunteers to the M. R. C.

The recent semi-annual meeting of the Elkhorn Valley Medical Society was not so largely attended as is usual for the midsummer meeting. Many enthusiastic supporters of that organization are now in government service, and those remaining at home have their time fully occupied by practice and other community duties.

Mrs. D. C. Bryant, wife of Dr. D. C. Bryant, died July 25, 1918, at Claremont, California. Doctor "Daddy" Bryant is an ex-president of our State Medical Association. He is well and favorable known as a teacher and practitioner of medicine. Many physicians in Nebraska and the middle west were his students in the class room, and at the bedside, imbibing knowledge from his example and precept. The entire medical profession in Nebraska extend condolence to our beloved Dr. D. C. Bryant in his bereavement.

### Councilor District War Committee Reports to Date.

First District—Douglas and Sarpy counties. Committee: A. P. Overgaard, Chairman; A. F. Tyler, J. H. Vance, Wm. P. Wherry, L. B. Bushman, F. H. Kuegle, B. W. Christie, Roy A. Dodge.

Tabulated list from this district not ready for publication.

Second District—Lancaster, Otoe and Cass counties. Committee: H. J. Lehnhoff, Chairman; M. U. Thomas, A. P. Ginn.

Tabulated list from this district not ready for publication.

The names of 33 who signed the resolution are reported.

Third District—Gage, Johnson, Nemaha, Pawnee, and Richardson counties. Committee: R. W. Fouts, Chairman; G. J. Rubleman, E. M. Tyler, W. T. Johnson, J. W. Waggener.

Tabulated list from this district not ready for publication.

The names of 50 who have signed the resolution are reported.

Fourth District—Knox, Cedar, Dixon, Dakota, Antelope, Pierce, Wayne, Thurston, Madison, Stanton, Cuming and Boyd counties. Committee: Arthur E. Cook, Chairman; M. H. Evans, C. L. Maxwell, F. A. Long, O. E. Underberg, W. T. Craft, H. S. Summers.

Tabulated list from this district not ready for publication.

The names of 26 who have signed the resolution are reported.

Fifth District—Burt, Washington, Dodge, Colfax, Platte, Boone, Nance and Merrick counties. Committee: R. C. Byers, Chairman; W. J. Davies.

Tabulated list from this district not ready for publication.

Sixth District—Saunders, Butler, Seward, Polk, York and Hamilton counties. Committee: E. O. Weber.

No report.

Seventh District—Clay, Fillmore, Saline, Nuckolls, Thayer, and Jefferson counties. Committee: H. E. Potter, Chairman; P. S. Dodson, J. W. Archerd, V. V. Smrha, J. W. Mitchell, A. J. Coats.

The names of 101 who have signed the resolution are reported.

Tabulated list from this district not ready for publication.

Eighth District—Cherry, Keya Paha, Brown, Rock, Holt, Sheridan, Dawes and Sioux counties. Committee: J. P. Gilligan, chairman.

Tabulated list from this district not ready for publication.

The names of fourteen who signed the resolution are reported.

Ninth District—Custer, Valley, Greeley, Sherman, Howard, Dawson, Buffalo, Hall, Grant, Hooker, Thomas, Blaine, Loup, Garfield, Wheeler and Logan counties. Committee: G. I. Sellon, Chairman.

Tabulated list from this district not ready for publication.

Tenth District—Gosper, Phelps, Adams, Furnas, Harlan, Franklin, Webster, Kearney, Chase, Hayes, Frontier, Dundy, Hitchcock and Red Willow counties. Committee: S. F. Sanders, Chairman; W. M. Robertson, A. S. Ambrose, J. O. Hoffman, W. D. Macknechie, Dr. Powell, Dr. Dugan.

Tabulated list from this district not ready for publication.

The names of sixty-five who signed the resolution are reported.

Eleventh District—Lincoln, Perkins, Keith, McPherson, Gordon, Kimball ,Cheyenne and Deuel counties. Committee: H. E. Mantor, Chairman.

No report.

Twelfth District—Scottsbluff, Banner, Box Butte and Morrill counties. Committee: A. J. Stewart, Chairman.

Tabulated list for this district not ready for publication.

The names of twenty-two who signed the resolution are reported.

## Orders to the Officers of Medical Reserve Corps of Nebraska.

To Camp Custer, Battle Creek, Mich., base hospital, from Fort Porter, Lieut. Oscar E. Coleman, Ainsworth.

To Camp Devens, Ayer, Mass., for duty, from Army Medical School, Lieut. Martin R. Broman, Lincoln.

To Camp Pike, Little Rock, Ark., for duty, Lieut. William Shepherd, Rulo.

To Brownsville, Texas, base hospital, from Camp Travis, Lieut. Joseph Antony, Omaha.

To Camp Bowie, Fort Worth, Texas, base hospital, from Camp Grant, Capt. Harry R. Carson, Norfolk.

To Camp Logan, Houston, Texas, for duty, from Fort Riley, Capt. Findley J. McRae, Albion.

To Camp Sevier, Greenville, S. C., for duty, from New York City, Capt. John R. Beatty, Butte.

To Camp Travis, Fort Sam Houston, Texas, base hospital, Major John M. Mayhew, Lincoln.

To Camp Wadsworth, Spartanburg, S. C., base hospital, from Camp Zachary Taylor, Capt. Samuel J. Stewart, Hastings.

To Fort Oglethorpe as instructor, from Camp Sevier, Capt. William N. Anderson, Omaha. For instruction, Capts. Eli B. Hamel, Hastings; Royal Scudder, Nalmo; James A. Trowbridge, Superior; Lieut. Harold E. White, Swanton.

To Fort Sill, Okla., base hospital, Capt. Elmer R. Porter, Omaha.

To Indianapolis, Ind., Chamber of Commerce, to make physical examinations and give medical attention to drafted men, and on completion to his proper station, from Fort Riley, Lieut. William H. Phillips, Carroll.

To Whipple Barracks, Ariz., for duty, from Fort Riley, Lieut. Francis J. Stejskal, Crete.

To Camp Beauregard, Alexandria, La., for duty, from Fort Riley, Lieut. Neill J. Everitt, Omaha.

To Camp Dix, Wrightstown, N. J., for duty, from Fort Riley, Lieut. George H. Demay, Wilsonville.

To Fort Oglethorpe for instruction, Capt. Isaac L. Bogen, Lincoln.

To Fort Riley for instruction, Capt. John G. W. Westerhoff, Carleton.

To Fort Sill, Okla., base hospital, Lieut. James S. McAvin, Omaha.

To Hoboken, N. J., base hospital, Capt. Justus E. Olsson, Lexington; Lieut. George H. Walker, Lincoln.

To Camp Custer, Battle Creek, Mich., base hospital, Capt. George B. Brash, Beatrice.

To Camp Devens, Ayer, Mass., for duty, from Camp Dix, Capt. Earl B. Brooks, Pawnee City; from Camp Grant, Lieut. Robert C. Person, Omaha.

To Camp Grant, Rockford, Ill., for duty, from Fort Riley, Capt. James S. Taylor, Fairbury.

To Camp Sevier, Greenville, S. C., for duty, from Camp Dodge, Lieut. Daniel Franklin, Omaha.

To Chicago, Ill., Northwestern University School of Medicine, for instruction, from Fort Riley, Lieut. J. Irwin Limburg, Walthill.

To Fort Riley for instruction, Capt. Allan J. Cameron, Herman; Lieut. Arthur B. Cramb, Tecumseh.

To Hoboken, N. J., base hospital, Lieut. Frederick W. Buckley, Beatrice.

To report by wire to the commanding general, Central Department, for assignment to duty, Lieut. Joseph H. Boyes, Hebron.

---

We have an inquiry about a Dr. Charles L. Loffler, who practiced medicine in Nebraska a short time between 1900 and 1916, and we will appreciate it if anyone knowing where he was located and about what date will furnish the Managing Editor of the Journal with this information.

# THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, LINCOLN, MAY, 1919

Vol. III. Norfolk, Nebraska, September, 1918. No. 9

CONTENTS.

Page

Complement Fixation in Tuberculosis, H. J. Lehnhoff ..... 265

Tuberculosis, A. K. Detwiler, M. D., Omaha ..... 268

Early Diagnosis of Cancer of the Uterus, Palmer Findley, M. D., Omaha ..... 273

Nuclear Paralysis, Frederick F. Teal, M. D., Lincoln ..... 276

Treatment of Syphilis, C. C. Tomlinson, M. D. ..... 277

Roentgen Diagnosis of Carcinoma of Stomach, Colon and Rectum, A. F. Tyler, B. Sc., M. D., Omaha ..... 280

Case Reports—

Carcinoma Head of Pancreas, A. Sachs, M. D., Omaha ..... 283

Editorial ..... 286

General Notes ..... 291

Recent Development in Intestinal Bacterology ..... 292

Orders to Nebraska Officers of the Medical Corps, U. S. Army During August ..... 293

## Complement Fixation in Tuberculosis.*

H. J. Lehnhoff.

The complement fixation in tuberculosis is a laboratory test. A laboratory test is a block of evidence. Any laboratory test taken alone, just as any other one symptom, one test or one sign alone, is not sufficient ground for making a diagnosis, and of itself should not condemn or fail to condemn an individual under consideration. Likewise the fixation test in tuberculosis is a block of evidence. To demonstrate the strength or weakness, the importance or unimportance, the practicability or impracticability of this block of evidence is the object of this essay.

The history of the fixation test for tuberculosis dates back only about fifteen years. In passing the history with a word, permit me to say that the very beginning of the application of the test is connected with the name of our friend Widal, who with Le Saurd in 1901 obtained an antigenic reaction in certain cases of tuberculosis. Also Wasserman, with the assistance of Bruck, in 1906 demonstrated an antibody to tuberculin in patients who had been treated with tuberculin, but they examined only thirteen cases of pulmonary tuberculosis. In the last ten years, and in the last five particularly, the workers in the field have been fairly numerous. Among the creditable men who have recently issued publications of their work stand Petroff of Saranac Lake and H. R. Miller of New York.

I do not care to take up the technic except to say that the antigen used in this experiment was secured from a well-known pharmaceutical manufacturer who has an extensive department of research and biology. It is prepared according to a slight modification of Miller's formula, and consists, in the main, of a ground emulsion of eighteen strains of bacilli in a salt solution. The serum from the patient was inactivated in every case. The tests were made in our own laboratory by an assistant. This assistant knew practically nothing of the history or symptoms or physical signs of the patients from whom blood was taken. Consequently it is fair to assume that the tests were made entirely free from all mental or psychological bias.

The fixation test was tried out on ninety individuals. In a few minor degree the cases with which this report is concerned are selective. In the beginning, when it was decided to make this experiment, the object was to try the fixation test on two classes of patients. In the first group were to be placed all those individuals in whom, from the history, present symptoms and physical signs, an active tuberculous process could be diagnosed without question. In the second group were to be placed about an equal number of patients in whom there was no suspicion of an active tuberculosis infection. This plan has been carried out. The second group, however, has been recharted into two classes, namely, a large class in which fall all the non-suspects having a negative fixation test, and a small class in which fall non-suspects having a positive fixation test. In order to make the charting complete and the result of the experiments plain and easy to grasp, the ninety individuals upon whom the fixation test was employed were classified as follows:

Number of cases examined, 90.

Group A—Number of cases, 40.

Class I. All cases known to have an active tuberculous lesion, and in which the fixation test was positive, 40.

Class II. All cases known to have an active tuberculous lesion, and in which the fixation test was negative, 00.

Group B—Number of cases, 50.

Class III. All cases in which there was no suspicion of an active tuberculous lesion, and in which the fixation test was negative, 42.

Class IV. All cases in which there are no suspicion of an active tuberculous process, and in which the fixation test was positive, 8.

In the two classes of non-suspects were a number of healthy individuals. The majority of these two classes, however, was made up of individuals who were afflicted with some non-tuberculous lesion.

The blood of a number of syphilitics was examined. This occurred for two reasons: (1) because, having taken the blood for a fixation test for syphilis, it was easy to carry out the fixation test for tuberculosis; (2) because, a number of observers have raised the question of syphilitic blood giving a positive fixation reaction for tuberculosis when an active tuberculous lesion did not exist in the individual from whom the syphilitic blood was taken.

All of the cases, with the exception of a few normal individuals, were among those that visited the office. This is, none of these tests were made upon inmates of sanatoriums, hospitals or camps.

The ninety cases are consecutive, with the excepton of three in whom the diagnosis, not only as regards the presence of tuberculosis but as regards other important lesions, was decidedly questionable.

Returning to the charts, it will be seen that in Class I there are forty patients. In these patients, from the history, the present symptoms and the physical signs, a diagnosis of an active tubercular process was made. The serum of all these patients gave a positive fixation test. In other words, in those patients in whom there was a known active tubercular process, the fixation reaction for tuberculosis was positive in 100 per cent of the cases. Consequently there are no cases in Class II. In other words, there are no cases in which an active tuberculous process had been diagnosed that gave a negative fixation reaction.

In Class III there are forty-two cases, or 84 per cent of the number of non-suspects of Group B. In Class IV there are eight cases, or 16 per cent of the number of non-suspects in Group B.

To repeat the fixation test for tuberculosis in those patients in whom a diagnosis of active tuberculosis could not be made clinically was negative in 84 per cent of the cases, and positive in 16 per cent.

In comparison with the percentages quoted in the literature, the percentage of positive reactions in known tuberculosis cases in the present experiment is high, as well as the percentage of negatives in those cases in which a diagnosis of tuberculosis has not been made. For instance, Hammer in 1912, obtained 97 per cent positive results in forty-six tuberculous cases. Calmette and Massol in 1912, in 134 tuberculous cases obtained a positive result in 92.5 per cent. Fraser in 1913, in known tuberculous individuals found a positive reaction in only 42.3 per cent of the cases, and in normal individuals his negative reactions were 96.6 per cent. Weir and his co-workers in 1913, in testing out 102 known cases, obtained positive results in 84.3 per cent. Bronfenbrenner in 1914, working with Bresredka's antigen, obtained 93.8 positives in known cases. Craig in 1915, in 166 known cases of pulmonary tuberculosis, demonstrated positive reactions in 96.2 per cent. He also tested the blood of 150 cases of syphilis and found only two positive reactions. In 100 normal individuals the tests were negtive in every case. Corper in 1916 found that in his clinically known tuberculous cases the test was positive in only thirty per cent. McCaskey in 1917 in 135 cases obtained positive results in about 75 per cent. H. R. Miller in 1916, in 284 active pulmonary cases, obtained a positive result in 96.8 per cent. In non-tuberculous and normal patients in cases numbering 144, the reaction was negative in every instance. He further states that in 242 positive Wassermann cases the test was negative except seven; and in these seven, tuberculosis was established in five cases and was not excluded in the other two. Petroff in 1917, in 212 cases of clinically active pulmonary tuberculosis, demonstrated a positive reaction in 93.8 per cent of the cases. In seventy-eight normal individuals the result was negative in 96 per cent.*

It will be noted that as these observations approach the present time their results are what we have most hoped to find. That is, the better we are qualified both in producing an antigen and in working out the reaction, the nearer will the positive findings in known tuberculous cases approach 100 per cent, and the nearer will the negative findings in cases known to be free from tuberculosis approach 100 per cent.

In the present report the percentage of positives in the clinically known tuberculous cases is unusually high. There are no observers, up to the present time, who have reported a positive reaction in 100 per cent of known active tuberculous cases. However, so far as this experiment goes, the facts must be accepted. I am passing them with very little comment. The reader may take them for what they are worth.

It may be advantageous to review briefly the eight cases occurring in Class IV.

No. 41 was a case sent by a milling company for examination preliminary to entering a local insurance benefit society. No abnormalities were found other than those of an acute urethritis. We did not have an opportunity to examine this case a second time.

GROUP B—CLASS IV.

| No. | Important Symptoms | Physical Findings | Sputum | Wassermann | T. B. Fix'n |
|---|---|---|---|---|---|
| 41 | None | Acute gonorrhoea | 0 | 0 | .... |
| 42 | Nervous and mental | Syphilis of nervous system | 0 | .... | .... |
| 43 | Convulsive seizures. | Heart block (?)<br>Angina (?) | 0 | 0 | .... |
| 44 | Precordial pain, sometimes radiating to the shoulder and arm. Rapid heart action. Gas accumulation. Joint soreness; headache. | Mild odenopathy, including epitrochlear. Lungs (?) Aortic dullness, 7 c. m. Heart dullness; enlarged to right. Old wall tense. No temperature; no pulse. | 0 | 1 | .... |
| 45 | Post-operative cough. | Rales. Bloody purulent sputum. Infarct (?) | ....<br>No. T. B. | .... | .... |
| 46 | Pregnant woman coming for examination of kidney on account of uremia with previous pregnancy. Father contracted "asthma" at age 35. Baby died at ten months of eczema and asthma. | None | 0 | .... | .... |
| 47 | Weakness; shortness of breath. | Aortic stenosis and regurgitation | 0 | 0 | .... |
| 48 | Weakness; dyspnoea; stomach disturbance. | Aortic stenosis and regurgitation | 0 | 0 | .... |

No. 42 is a man past sixty years of age with a specific infection of the central nervous system, with a discharge of cerebo-spinal fluid from the nose. There were no pulmonary findings.

No. 43 was a patient who had convulsive seizures and in whom we diagnosed a heart block. The diagnosis was far from clear. Another physician had diagnosed angina. He was thirty-seven years of age, with a negative Wasserman but a positive T. B. fixation.

---

*Note: The above cases are quoted.

No. 44 complained of a precordial pain, sometimes radiating to the shoulder, with some gas accumulation and occasionally joint soreness. He presented a mild odenopathy including the epitrochlear glands. There was an aortic dullness of 7 c. m. The heart was enlarged. There was a very mild one plus Wasserman and a mild T. B. fixation.

No. 45 was a post-operative case that developed pain, rales, and a bloody sputum. A pulmonary infarcation was diagnosed. By the time the patient had recovered from the surgical interference the lung condition had entirely disappeared.

No. 46 was a woman without symptoms who came for kidney examination. She was pregnant, and with a previous pregancy had an attack of uremia. No abnormalities of the lung were found. The familly history in this case showed that the father contracted "asthma" at the age of thirty-five, and one baby died at ten months of eczema and "asthma."

Nos. 47 and 48 were both cases of aortic stenosis and regurgitation.

Nos. 43 and 44 were slightly anemic, as were Nos. 47 and 48.

It may be of interest to add that since completing this list, two other cases of anemia have shown positive fixation tests. One is the beginning of a pernicious anemia; the other is a boy of fourteen who has hemolytic icterus.

### Conclusions.

1. A test that will give a positive reaction in 100 per cent of known tuberculous cases is a means of obtaining a block of evidence in diagnosis that is highly valuable. If the positive reactions in positive cases were even less—say as low as 80 per cent—the test would be a valuable block of evidence.

2. It is of value particularly in the border-line case. Like other diseases, the typical cases of advanced tuberculosis is easy to diagnose. However, the border-line cases (border-line from either the stand point of incipiency in otherwise normal individuals, or from the standpoint of mild active lesions accompanying predominant non-tuberculous lesions) are often most difficult of diagnosis. In such groups of cases, the long-looked-for serological test, which is now at hand, is valuable.

The report of this experiment would not be complete should I not take one moment to pay the highest possible respect to our associate, Lieutenant Geo. W. Covey, now in the service, whose untiring and unscientious efforts not only initiated the fixation test for tuberculosis in our laboratories, but also stimulated his co-workers to a degree of active interest which obtained the results herein contained.

---

## Tuberculosis.*

A. K. Detwiler, M. D., Omaha.

Tuberculosis processes within the chest may develop predominantly u ponthe functional surfaces of the air passages, or follow along the blood and lymph channels through the interstitial tissues of the lungs, or remain chiefly confined to the bronchial glands.

Those developing upon the functional surfaces of the air passages tend to manifest themselves by disturbances of function, increased secretion and by the physical signs of bronchitis and broncholobular pneumonia. This tuberculosis of the functional surfaces, or parenchymatous tuberculosis, as it is called by Lapham, causes bronchitis and broncholobular pneumonias with the fundamental characteristic of inflammatory reaction to irritation, i. e., the hyperemia leads to congestion, increased secretory activity, evudation, desquamation, caseation, cough and expectoration. The absorption of toxins in almost unavoidable and therefore increased temperature and frequency of pulse rate are characteristic consequences. The physical signs are those of wet, infiltrated tissue with roughening and exaggeration of breath sounds, wet rales and dullness. Because the physical signs and the symptoms of parenchymatous tuberculosis are in accord the diagnosis is easy. The prognosis, however, remains uncertain, until we determine the effect of rest upon the hyperemic pulmonary vessels. If rest and relief from strain does not stop the leakage from over-distended vessels, and the area of wet rales and dullness is increased in extent, we can not stop this extension without artificial help, and if three or four months of rest in bed in the open air, does not succeed in arresting it, compression of the lung may be necessary in order to protect the patient from pneumonic extension or "galloping consumption."

On the other hand, taking the strain from the pulmonary circulation by absolute rest sometimes accomplishes spectacular results, by stopping the leakage and by drying out the tissues. In many cases all that is necessary, is to restore the balance of circulation in the pulmonary vessels by taking away the strain and, through the avoidance of all physical effort so to lessen the amount of blood forced through them that stasis, congestion and leakage are prevented, and the lung dries out. It is possible in these cases that secondary edematous infiltrations are responsible for the condition of the lungs and that we do not always make a distinction between the secondary edematous areas and primary tuberculous consolidations, because the physical signs are the same. In a case with dullness, wet rales and exaggerated, roughened breath sounds over the whole of one lung and down to the second rib in the other, the extent of primary tuberculous consolidations, as compared with their secondary edematous consequences, will make a great difference in the prognosis. If one lung is full of "disintegrating foci" and there are inflammatory processes down to the second rib in the other lung, the prognosis for this third-stage case is bad, and it is more than doubtful if the most complete rest will dry up these areas. But if a large part of the dullness and wet areas are due to secondary edema and rest stops the leakage and dries out the tissues, then the prognosis is quite another affair. As week after week the wet rales and the dullness disappear and the line of dryness climbs higher and higher, we find that just so much of the lung must have been edematous, because nothing but edema could disappear so fast. Finally, when the dullness and wet rales no longer disappear over new areas, and we find they remain fixed, then we infer that the secondary edemas have been dried up and the remaining wet portion of the lung represents the primary tuberculous consolidations.

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

If we wait until this knowledge is gained, we shall classify the case as one of complete involvement of one lung and apex of the other or as one of primary tuberculous consolidation throughout the extent remaining unchanged by rest, and of secondary edematous infiltrations through those parts so rapidly dried out. Many remarkable recoveries of third-stage cases may be explained by this classification and it may be more accurate in the future to base our classification and statistics upon the condition of the lungs after the effects of rest have been obtained, instead of before. Recognition of edematous areas might also influence the prognosis and treatment of certain cases. A case was sent to us in a seemingly desperate condition; temperature 103, pulse 130, weak and irregular, respirations 30, and persistent profuse expectoration of frothy sputum; a good deal of sweating, prostration and extreme dyspnea, wet rales, dullness and exaggerated, roughened breath sounds over all the left lung and down to the second rib in the right. The referring physician regarded the case as advanced, hopeless, and belonging to the third-stage. With rest in bed, the pulmonary circulation dried out, the edematous, frothy expectoration ceased and week by week the areas of dullness and wet rales disappeared. In three months, the maximum temperature was 99.3, the pulse 96, respiration 20, and dyspnea and sweating gone; appetite, strength and weight rapidly improving. The upper lobe of the left lung marked the limit of improvement. When its boundaries were reached, the spectacular weekly progress ceased and thenceforth there were few changes in the lungs, but the clinical gain continued to be most gratifying. This, in all probability was a case of primary tuberculous consolidation of the upper lobe of the left lung, with secondary edematous infiltrations of the lower lobe of the left and the apex of the right lung. The high temperature, increased frequency of pulse and respirations, sweating, dyspnea and frothy, persistent expectoration, were all caused by the absorption of toxins from wet, boggy tissues and as these edemas were absorbed, the toxemia lessened. After six months of drying out, the recovery was so complete that the case might easily have been regarded as "arrested," since there were no clinical signs of activity. This would be a great mistake, for the stoppage of leakage is a very different matter from the restoration of structural integrity to which it is a necessary preliminary.

The relief from overdistention of damaged pulmonary vessels is the first requisite, the absorption of edemas the second; but when this has been accomplished, nothing permanent has been gained, nothing which would not be lost at once by over-strain and the return of distention. So far the ground has been drained and cleared and now we are in the proper condition for recovery; now we have really to recover, by restoring the structural integrity of the tissues, which means a year or more of careful living and prevention of strain. The prognosis in such a case is good, provided you can convince the patient of the necessity for time to repair firmly the destruction of years of gradual development and provided you can make him understand that absence of symptoms has nothing to do with absence of danger. With no elevated temperature, cough or expectoration, with appetite, weight and strength restored, he naturally compares such condition with recovery from typhoid and other acute diseases and argues that if he feels well and there are no symptoms of illness, then he must be well. He is apt to venture upon this or that forbidden indulgence and when no elevated temperature or other symptoms supervene, he says triumphantly that this has not hurt him. This may be true, but it is also true that during all the years of unsuspected, insidious extension of tuberculous processes through the lungs, there were no symptoms to warn and that now he may trifle with his future until it is too late and his opportunity has gone. The prognosis depends more upon the intelligence, judgment and self-control of the patient than upon the extent of tuberculous processes in the lungs.

There are many reasons for these edematous infiltrations. Turban emphasized the tendency of tuberculous toxins to increase the permeability and to over-distend the pulmonary vessels, especially in the regions nearest the production of toxins. This is illustrated in the local reaction to subcutaneous injections of tuberculin as well as by the focal reaction in the lungs. The insufficiency of the cardiac muscles and the lacking vis a tergo, may have something to do with stasis and congestion, just as in other pulmonary edemas, and the blockage caused by tuberculous consolidations may be another factor. As the blood comes up to these obstructed areas through which it cannot pass, it is turned back and thus a double strain is caused, which is not relieved by abundant anastomosis as in other organs. Whatever the cause, the primary factor in recovery is relief from physical effort—i. e., rest and the restoration of the sufficiency of the circulation through the damaged areas in the lungs for a sufficient length of time to secure their recovery.

The pathological changes in parenchymatous tuberculosis are hyperemia, leakage and the inflammatory response to an irritant shown by bronchitis and pneumonias, with their physical signs of exaggerated, roughened breath sounds, wet rales and dullness, which conditions are easily diagnosed.

It is quite a different matter, however, with tuberculous processes entering the lung from the bronchial glands and following the blood vessels and lymphatics along their peribronchial sheaths to their distribution in the terminal alveolar circulation. Beginning at the hilus and creeping through the lungs, these interstitial extensions do not provoke inflammatory reactions, but insidiously creeping from point to point, they are like the sclerosing processes of connective tissue infiltrations of other organs and differ very little from the interstitial sclerosis of the kidneys, liver, spleen and pancreas and end similarly in fibroid suppression of functional activities. In this interstitial sclerosis of the lung, anemia instead of hyperemia prevails. Instead of being solidly enlarged like the parenchymatous inflammations of the liver and lung, the sclerosed lung is dry, shrunken and contracted like the cirrhosed liver and kidneys. The functional portions are not stimulated, but depressed. There is no increased secretion to remove by coughing, no decomposing products to cause toxemia; it is a withering, shrinking disappearance of the breathing spaces situated at the end of the branches of the bronchial tree, caused by the over-growth of the scale-like processes creeping out along the bronchi. The larger bronchial branches have rigid walls which resist the pressure of the infiltrations, but as soon as the smaller branches are reached, whose walls are insufficiently protected from pressure, they are more or less stenosed. At first, the stenosis is partial and then the air may enter the alveoli more easily than it can escape, because the stenosis is relieved when the chest wall is pulled out and it returns as the chest wall falls back, making it difficult for the air to escape and establishing a tendency for it to accumulate in the terminal lobuli. When the stenosis becomes complete, the air cannot pass on to the infundibuli and the lobuli collapse and areas of atelectasis develop. In chronic fibroid phthisis the breathing spaces are gradually obliterated in this way until the leaves are all stripped off and only the branches of the tree remain. The loss of elasticity, the inability to stretch, the inability to inflate the infundibuli, cause the faltering and lagging and retraction in sclerosis of the lung.

What are the physical signs that first suggest this gradual extinction of breathing spaces? Not dullness, because the air content of the larger bronchi is well preserved and in incomplete stenosis of the bronchi it is even increased. Not wet rales, because an anemic dryness prevails; not harsh, exaggerated breath sounds, because the functional surfaces are smooth and there is nothing to cause roughness and exaggeration; on the contrary, the breath sounds are lessened in vigor, partly on account of the emphysema, and thus suppression of breath sounds and prolongation of expiration are the first indications that the air does not enter or leave the lung properly, because the bronchi are stenosed. When some of the smaller bronchi are obstructed more than others, their terminal lobuli may not all fill with equal rapidity; as one infundibulum after another expands, the breath sounds are uneven, and interupted or cogwheel breathing develops. As one lobule after another collapses, the atelectatic areas furnish enough consolidation to cause increased tactile fremitus.

The diagnosis of interstitial sclerosis of the lungs is not made like the diagnosis of parenchymatous disease from dullness, because the air content of the larger bronchi prevails over the atelectasis of the collapsed areas; nor by wet rales, for there are no edemas and the tissues are dry; not by roughened breath sounds, because the air passes over unaltered functional surfaces; but by the suppression and irregularity of the breath sounds caused by the inability of the air properly to enter and properly to expand the alveoli and then properly escape. Therefore, suppressed, uneven inspiration and prolonged expiration are the characteristics of interstitial sclerosis until secondary complications develop, when the parenchymatous signs of broncholobular pneumonias appear.

The prognosis of fibroid phthisis is good, provided the extensions of the tuberculous processes can be stopped. As a rule, during years of development there is little absorption of toxins from the dry tissues and consequently little toxemia. Absence of symptoms and absence of physical signs which are recognized as indicating tuberculous changes in the lungs are the essential characteristics of these years of gradual extension. Because of this absence of symptoms, we fair to interpret correct X-Ray and physical findings when we make the diagnosis of peribronchial infiltration of the lungs, because without symptoms we have no proof that the processes undoubtedly present are active or ever will be. Without symptoms we can not say that tuberculous processes in the lungs are clinically active and so every day it is becoming a much simpler and easier matter to detect them than to establish their significance after we find them.

In our dispensary work we are constantly proving that the world is full of working people with the physical and X-Ray proofs of tuberculous processes in their lungs and little or no impairment of health. While in interstitial sclerosis of the lungs, the prognosis is difficult, it is well to remember that all advanced and hopeless cases were once in the stage of clinical inactivity with no symptoms to inform us of their effects upon the health, so that the question "Will this case progress further?" cannot be answered off-hand with accuracy. Slight rises of temperature and neurasthenic and other abnormalities may not seem to warrant the price of a tuberculous regime, "but we may some day believe that one of the first and most constant effects of tuberculous toxemia is depression of the endocrine system, which may be regarded as specific and as much in need of correction as any other symptoms. While these symptoms persist, we can not say that tuberculous processes are "clinically inactive," but on the contrary we will infer from "an unstable heat center" and "thyroid perversions" and "neurasthenia" that there must be some underlying cause and seek it in the production of tuberculous toxins." Endocrinal insufficiency may come to be as specific a manifestation of tuberculosis of an interstitial nature as cough, loss of weight, temperature, sweating, etc., are manifestations of a parenchymatous tuberculosis.

Fibroid phthitis may persist for years and the patient finally die of something else, but there is always the possibility of necrosis,of erosion into the air passages, with consequent bronchitis and broncholobular pneumonia.

There is also the danger that bloodvessels may be eroded, with rapid dissemination of tubercle bacilli and generalized or acute military tuberculosis.

Tuberculous processes in the bronchial glands, beginning in some cases almost as soon as life itself, may persist indefinitely without causing the slightest impairment of health or any symtoms of any kind, or they may declare themselves suddenly with startling rapidity, or induce functional abnormalities usually regarded as primarily originating in the system manifesting them, or declare themselves by specific symptoms, depending entirely on their location.

Death is usually caused by pressure upon or perforation of important structures, this as a rule occurs in childhood or early in adult life. Cases have been reported of steady development throughout life with no recognizable symptoms, and death in the last decades from occulsion of the superior vena cava or pressure upon the trachea and bronchi. It is possible that there are cases of "spasmodic asthma," intractable to operations and vaccines, which are caused by partial stenosis of the trachea and bronchi from the pressure of the enlarged tuberculous bronchial glands. In children, sudden death in a few hours from suffocation may be caused by perforation into the trachea or main bronchi and, as a rule, the erosion is not preceded by symptoms. The children are usually well and the conditioon is entirely unsuspected. Tuberculous processes in the bronchial glands do not produce symptoms unless adjacent structures are sufficiently affected by the pressure or there is a sufficient absorption of toxins.

Before we can understand the subject of tuberculosis of the lungs, we must know when it begins and why and how. Today our ignorance of these three facts is complete. We have been studying only its later stages. We must learn to unravel the complicated confusion caused by the inextricable mingling of cause and effect of systemic depressions, and to trace throughout its labyrinthine developments, the results of tuberculous toxemia, which we are now treating as primary diseases. Since tuberculosis of the bronchial glands begins in the first days of infancy, let us begin our study of tuberculosis with all the infants coming under our care, and test each one for evidence of the presence of tubercle bacilli within its body and the production of allergie and of sensitization, to tubercle toxins. The Von Pirquet test could easily be made every month and the records kept. In this way we should learn whether sensitization to tubercle bacilli is the result of exposure and bad environment or whether there is reason to suspect that tubercle bacilli are as constant residents as colon bacilli and therefore the development of tuberculous processes is subject to the same laws as the development of morbid processes by colon or any other bacilli habitually resident. With practically all children sensitized to tubercle bacilli, by the time they reach maturity, and only a very small percentage developing tuberculosis, it would seem as if the practical prevention of the disease might consist in detecting the earliest stages of development rather than in endeavoring to content ourselves with efforts to prevent the entrance of tubercle bacilli into their bodies, which is probably an impossible task. In Australia, the death rate has been astonishingly reduced, but even in this most thorough and best organized effort to exterminate tuberculosis that has ever been made, the results are temporary and concern only the individual victims. It is more than probable that the supply of victims will be furnished annually, for this report says that the number of cases has not been reduced and that is especially true of children. If we could devote several hours a year to each pupil in the public schools, we might amass enough information to place our comprehension of tuberculosis upon quite another bases. We are looking after the abnormal children, but that is not enough. We should carefully study the well children in order to detect every case of beginning development of tuberculous processes and arrest them. "An open-air school, a little extra feeding, a little rest and a little looking after in the home and the dread disaster of the future is averted."

The first community to reduce the number of tuberculosis cases will do much to solve the problem of the whole world. As yet only the death rate has been reduced, and the number of cases goes on increasing, especially among children. The orthopedists and pediatrists should know the relation of the secondary extensions of tuberculous infection and tuberculous from the bronchial glands into their special fields of nutrition and joint

deformities. It is possible that the whole subject of tuberculous deformities is secondary to tuberculosis of the bronchial glands.
Lapham Boston M. & S. Jour., July, 1917.

## Early Diagnosis of Cancer of the Uterus.*

Palmer Findley, M. D., Omaha.

It is estimated that one woman in eight, 35 years of age and over, dies of cancer and that approximately one-third of all cancers in women are located primarily in the uterus. Couple this statement with the accepted conclusion that all neglected cases end fatally and we have established our premises for a serious consideration of our subject in hand—that of the early recognition of cancer of the uterus.

Of the diseases affecting adult life, cancer ranks third in point of frequency; pneumonia and tuberculosis taking precedent.

Hoffman as chairman of the committee on cancer statistics reports 80,000 deaths annually from cancer and estimates that the annual increase is two and one-half percent. In a population of 100,000,000 this means 2500 additional deaths each year from cancer and this in spite of improved methods in diagnosis and treatment.

Cancer is no respecter of race or social position; it is found in every land and no age is exempt. I have seen two record cases, one an adenocarcinoma of the cervix in an infant of six months and the other a squamous cell cancer of the cervix in a woman 93 years of age who had passed the menopause 45 years. In general it may be said that cancer of the cervix is found in women of middle age who have born one or more children, while cancer of the body of the uterus more often follows the menopause and is found in women who, as a rule, have borne few or no children. Again, it is of interest to note that cancer of the uterus in parous women is usually manifest several years following the last child-birth.

It is estimated that 60 percent of cancers arise ten or more years after the last childbirth and that 20 percent arise twenty or more years after childbearing. We find in these statements a suggestion that there is a probable relationship between certain pathological conditions resident in the uterus which conduce both to sterility and to the development of cancer; lesions which may be regarded as precancerous. I here refer particularly to endometritis and to erosions and eversions of the cervix. We have heard much of lacerations of the cervix as forerunners of cancer. In this connection it is of interest to note that no case is yet on record where a cancer has developed in a cervical scar. On the other hand, it is a matter of common observation that erosions and eversions of the cervix not infrequently give way to malignant changes. So frequently is this true we are led to the conclusion that long continued irritation and inflammation pave the way to malignant formation. To appreciate this fact we have only to refer to the varied alterations in the cell structure of erosions, both in the healed and unhealed varities. Epithelial cells are grouped in a most atypical manner; newly formed glands display great variation in position, size and cantour. The surface epithelium is irregularly stratified and squamous, often penetrating deep into the lumen of glands, while various forms of degeneration and cyst formation characterize the gland structures. In the healing stage the epithelial covering presents several layers of irregular rounded cells which bear no resemblance to the regular squamous variety. Bonney found evidences of preexisting erosions and eversions in all early cancers examined and even in advanced cancers there were evidences of a preexisting inflammatory reaction in the form of lymphocytes and plasma cells. Whether these so-called precancerous lesions prepare the way for the development of cancer or whether they constitute an attempt on the part of the tissues to proect themselves against cancer that is already implanted is, in the opinion of Bonney, a matter of speculation.

The assertion has been made that **"there are no early symptoms of cancer of the cervix."** There is much truth in this statement. Symptoms directly chargeable to cancer of the cervix usually appear late and are the result of injury and necrosis of cancerous tissue. It follows that when the first warning is given of cancer of the cervix the disease is usually far advanced. It is not implied that the disease has passed the confines of the uterus and, therefore, inoperable by the time of onset of symptoms, but that we will almost invariably find the uterine wall deeply infiltrated and, therefore, approaching inoperability if indeed it has not already become inoperable. Schawta found that 13 percent of all cases of cancer of the cervix which presented themselves at his clinic within thirty days of the onset of symptoms were inoperable and he might have added that all cases were well on the way to the stage of inoperability.

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

Unforunately for an early diagnosis it so often happens that at the onset of cancer the patient increases in weight and in well-being Indeed the majority of cases which I have seen have been in women of more than average weight.

Nine women in ten do not consult a physician short of three to six months after the onset of symptoms. This is so because of timidity, of the fear of verifying their suspicion of a dreadful malady but, above all, because of the prevailing impression that an irregular flow is natural at the menopause and that pain always accompanies cancer. Hence advise is not ordinarily sought until profuse and prolonged hemorrhages, pain and failing strength impel her to seek relief.

The initial symptom of cancer of the cervix is hemorrhage in approximately 40 percent of cases, pain in 20 percent and watery discharges in 5 percent. In about one case in three bleeding and leucorrhoeal discharges occur simultaneously. The disease is known to become far advanced without occasioning hemorrhage, but so far as my personal experience goes leucorrheal discharges are invariably present in all advanced cases. I have come to regard watery discharges as indicative of cancer as is hemorrhage when occurring late in life. It is the scirrhus variety of cancer that bleeds late and early give rise to watery discharges, while hemorrhage is a early manifestation of papillary forms of cancer. Where pain is chargeable to the cancer the disease has usually run more than half its course. So long as the cancer is confined to the uterus, there is little or no pain. Where pain is an early symptom, it is not chargeable to the cancer but rather to inflammatory and other associated pelvic lesions.

It is apparent that the early recognition of cancer of the cervix is dependent upon a physical examination rather than upon clinical symptoms. To wait for pronounced clinical symptoms is to wait too long. It may be said that a radical operation will save 50 per cent of all cases if the diagnosis is made in the early stage of the disease, and by the early stage I mean the stage which is often marked by no symptoms and which cannot exist long after the onset of symptoms.

Digital and bimanuel examination combined with direct inspection through a speculum will often suffice for a diagnosis in the early stage as well as in the late. Early observerers laid emphasis upon the characteristics signs of friability and bleeding in cancer of the cervix and they were seldom misled. No other growth of the cervix displays friability and bleeding to so marked a degree as does cancer. It is all but true that these phenomina are pathognomonic of cancer of the cervix and when well marked there is little need for a microscopic examination. In examining a woman of advanced years, if bleeding is incited by a digital examination, suspicion of cancer is always awakened and the demand for a searching examination is imperative; an examination which should embrace a microscopic examination of an excised piece from the cervix, if found suspicious, and of scrapings from the endometrium.

It is of interest to note the clinical manifestations of cancer of the uterus in respect to its morphology. Whether found in the cervix or body of the uterus cancer assumes either the everted or the inverted form. In the everted form the proliferating cells develop papillary, fungous or cauliflower excressences upon the surface; while in the inverted form there may be little or no alteration of the surface, the proliferating cells infiltrating the underlying structures. In either event the cell growth is not confined to epithelial structures, the stroma cells are likewise increased to a variable degree. In proportion to the predominance of epithelial proliferation at the expense of stroma the element of friability predominates in the cancer structure. And hand in hand with friability is bleeding. Where the stroma predominates over the epithelial structures the growths are firmer, friability and bleeding are not pronounced but on the other hand there is the greater disposition to the development of necrosis, leading to the appearance of odorous discharges with more or less loss of blood.

In papillary and cauliflower growths these vascular projections are readily broken off and hence we find bleeding as an early manifestation. Couple the fact of early and profuse bleeding with that of late infiltration of the cervix in cauliflower growths and we have the answer for the relatively favorable prognosis in these cases. The bearer early seeks relief from the hemorrhages which long precede the involvement of structures lying beyond the confines of the uterus.

Not so with the infiltrating or inverted variety. Here there is no bleeding and no odorous discharge until the surface has become broken down. Unfortunately superficial necrosis, which leads to loss of blood and odorous discharges, does not usually occur until the cervix is deeply infiltrated. In the stage of infiltration without degeneration the sole symptom that may and should call attention to the possible existence of a cancerous growth is a watery, acrid but odorless discharge. Unhappily this is the most frequent type of cervical cancer as well as the most unfavorable type for the reason that symptoms are long delayed. It is in just such cases that we must be guided by our suspicions in removing a wedge from the cervix and submitting the tissue to a microscopic examination. To wait for more definite anatomical changes and for loss of blood, odorous discharges, pain and loss of weight is to invite disaster.

Almost all cancers within the cervical canal are of the everted variety which bleed early. Exertion of any sort will incite bleeding; the explanation being that upon exertion the uterus is bent at the cervix and this cracks the projecting cancerous masses (Sampson). This can be demonstrated by bimanuel manipulation—bending the uterus forward upon the cervix. Cervical cancer is not accompanied by profuse menstrual flowing as is cancer of the body of the uterus.

The clinical picture of cancer of the uterus as it appears in many text books is that of hemorrhage, foul discharges, pain, loss of weight and cachexia which Sampson very aptly likens to that other picture unfortunately familiar to us all—high temperature, abdominal distention, fecal vomiting, obstipation, thready pulse and pinched expression —the picture of appendicitis that is beyond hope.

Of all cases of irregular hemorrhages at the climacteric only one in sixty proves to be cancerous but the finding of the one in sixty, even at the expense of a searching examination, will amply reward one for his trouble. Climacteric hemorrhage is a term that has been commonly employed to designate uterine hemorrhages that have no demonstrable underlying pathology but in reality it embraces hemorrhages occurring at the climacteric from whatever cause. In the decade immediately preceding the menopause, 30 to 40 years of age, uterine hemorrhage is rarely due to cancer. In point of frequency I would present the causes of uterine hemorrhage at this time as follows: subinvolution, retained products of conception and infections following labor and abortion, fibroids, inflammatory disease of the uterine adnexae and hyperfunctionating ovaries. Much has been written but little is known of the secretions of the ductless glands with the exception of the ovary in causing uterine bleeding. We can say no more than that uterine hemorrhages seem to be due to correlative disturbances in the secretions of the ductless glands. One thing is definitely settled in relation to uterine hemorrhage and the ductless glands—hyper and dysfunction of the ovary as seen in cystic ovaries, lutean cysts and persistent corpora lutea, are potent factors in producing uterine hypertrophy and hemorrhage.

From forty to fifty years of age, as I have said, uterine bleeding is caused by cancer in about one case in sixty. This is the period when cancer of the cervix is most often found and we ask, what are the lesions most often found at this period of life as the causal factors in uterine bleeding. Unquestionably myopathic hemorrhages head the list and I believe will equal all other causes combined; but it is only by excluding all other causes in any given case that the bleeding may be chargeable to muscular insufficiency. It is at this time that uterine polyps are prone to develop, fibroids are not rare and inflammatory lesions of the ovary bring about altered secretions which in turn produce uterine bleeding.

After sixty years of age there are essentially but two causes of uterine bleeding, i. e., cancer and muscular insufficiency, sharing about equal honors in point of frequency.

We conclude that if we are to safeguard our patients of the cancer bearing age we are to look with suspicion upon every excess in the menstrual flow, upon all loss of blood, however small, when occurring out of season, upon all vaginal discharges of whatever character and we are to lose no time in pursuing tentative measures.

The points of interest which I desire to emphasize are:-

1. The relative frequency with which cancer effects the uterus—one-third of all cancers in women.

2. No age is exempt but the largest number is between 40 and 50 years.

3. Erosions and eversions of the cervix and endometritis are undoubtedly precancerous lesions. The role which lacerations of the cervix, in the absence of infection plays is doubtful and has probably been exaggerated.

4. Cancer of the cervix is usually well developed and often inoperable before the onset of symptoms. This accounts, in large part, for the appalling percentages of recurrence in operated cases.

5. If we are to improve our statistics of cancer it is evident that we must educate the laity in the early clinical manifestations of cancer to the end that they will seek medical advise without delay and we would do well to advocate the examining of all women at intervals of six to twelve months throughout the cancer bearing age.

## Nuclear Paralysis.*

Frederick F. Teal, M. D., Lincoln.

Mrs. M. P. M. Age 48. Came to consult me in regard to her eyes, Jan. 1, 1918. The history follows: Has been seeing double for four months, the condition coming on gradually. She has been refracted three times by an optician and consulted oculists. One of the latter advised X-ray for the teeth and she subsequently had an impacted molar and five other teeth removed, but with no relief. Three days ago there was a complete ptosis of right lid which she laid to the fact that she had been keeping it bandaged on account of double vision. When the trouble first began she had dizzy spells, almost falling at times. There has been no vomiting. Complains of slight numbness in right arm. Ocular movements have ranged from a slight impairment of motion to almost complete inability to move the eyes. Later there was partial ptosis of left lid. Examination showed an unusually healthy looking woman with a negative history. Had seven children, two dying of acute diseases and the third being an eight months baby. Kidney negative. Wassermann negative, no history of sinus disease, falling, or acute or chronic illness in recent years. Blood pressure 155. Transillumination showed sinuses clear. No enlargement of blind spot in either eye. Fields normal.

The fundi were both normal except for a small patch of choroidal degeneration in left eye that looks like an old hemorrhage just below the disc.

Examination of the ocular movements showed practically almost complete ptosis and paralysis of all the external muscles of right eye with paralysis of different degrees of external muscles of left eye including the upper lid. Subsequently all the muscles were involved and she presented the appearance of being unable to move her eye balls in any direction, staring straight ahead, with lids half closed. The ciliary muscles and iris of each eye were absolutely unaffected. Vision with glasses 15/15 in each eye. In every other way she seems perfectly well except the double vision and a frosted glass over one eye stopped that. I saw her two days ago and there has been considerable improvement.

Right eye, upward motion slight, downward 10°, inward slight, outward 30°.

Left eye, upward motion 10°, downward 40°, inward 30°, outward 25°.

The lid covers the upper third of right pupil and upper fourth of left.

This picture as presented is characteristic of the syndrome described under the term Chronic Progressive Opthalmoplegia Externa or Nuclear Paralysis. The lesion is intracranial and located in the nuclei of the motor nerves of the eye, (3d, 4th and 6th.)

The iris and ciliary muscles are supplied by the third nerve and the natural query is, why are they not involved? The fact is that the fibres supplying these two muscles have a little special nucleus of their own which is situated not along the floor of the fourth ventricle but at some distance from it.

The ptosis is rarely complete, but is usually present in some degree. One or both eyes may be affected. The causes are the usual constitutional and organic affections and toxemias of different kinds. The pathology is of degenerative, inflammatory or hemorrhagic character. The disease may be acute, (generally following the acute infections, as grippe, diphtheria, scarletina) or chronic. In the chronic form the course is slower, in fact becoming stationary at any stage of the paralysis and remaining so for years. As already intimated the lids may or may not be involved. It may accompany loco-motor ataxia, general paresis, bulbar paralysis, disseminated sclerosis and progressive muscular atrophy. The treatment involves getting rid of the cause and where there is none apparent, the iodides, with active elimination and strychnin apparently do good as has been found in the case described.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

## Treatment of Syphilis.*

C. C. Tomlinson, M. D.

It has been said that this war will bring syphilis unto its own. Following closely upon the recent important facts learned about this disease the war will add the results of a thorough trial of our newer methods of diagnosis prophylaxis and treatment. The problem of syphilis is a major one. Various estimates place the number of syphilitics in the United States in the neighborhood of 10,000,000, which, stated proportionately, is one out of each ten inhabitants. The Wassermann test has added valuable statistics on the prevalence of syphilis, and it is now known that many of the chronic conditions with ill-defined etiology are due to syphilis. A reliable index of the prevalence of syphilis is furnished in bulletin No. 8 (1) issued from the office of the Surgeon General.

At the direction of the Surgeon General blood specimens were taken at Fort Slocum and Columbus Barracks on every man accepted, and enlisted less than a week, until 500 had been taken at each place. Of these 1019 accepted recruits 16.77% were shown to be probably syphilitic. As the 1019 men represented but 17% of the total number applying for admission it is very probably the 83% rejected would have shown a much higher per cent of syphilis. The author concludes that among the young men of civil life between the ages of 20 and 30, and of the general class belonging to occupations mentioned in his report, fully 20% have syphilis.

Our Federal Government, through official channels, has declared venereal disease to be just about the army's greatest problem. A major problem from the standpoint of winning the war. Though the war will give us additional information regarding the disease it will also add to its magnitude, for syphilis is known to increase during war and for the five year period following war, not only among soldiers but among the civiliar population as well. We should therefore recognize our responsibility in this emergency and prepare ourselves for the proper handling of this disease. We know its cause and the condition under which it is transmitted. We have precise methods for its diagnosis in all stages. We have specific methods of treatment with which we may rapidly control its infectiousness. With these facts at hand the responsibility for its control rests largely with the general practitioner, for it is he who sees a large percentage of the cases in an early stage, and it is at this stage that best results are obtained from treatment. Various attempts to control the spread of syphilis through legislation while in a degree effective, have not proven entirely satisfactory and our most eminent syphilographers consider the problem one of therapeutic attack rather than legislation.

Patients with syphilis should be taken into the confidence of their physician and warned by him of its possible consequences and impressed with the importance of their complete cooperation with him if the best results are to be obtained. They should not be allowed to believe that one or two so-called "shots" of salvarsan will fix them out. They will be better satisfied and much more apt to continue treatment to a cure if told in the beginning that an average of three years is required to bring about a cure. Such terms as "Touch of Syphilis," and "Bad Blood," cannot be too strongly condemned. Many people believe that syphilis always breaks out on the skin and it is hard for them to believe that their tabetic pains or other late manifestations are the result of a continuation of the process which began as a chancre and was so surely cured twenty years previously. Many physicians are directly responsible for the more serious late manifestations of the disease because they treat a patient's active lesions until they have cleared up, and then allow him to pass from observation, without impressing him with the need for continued routine treatment.

The past few years have seen the Wassermann test come into quite general use. There remains however, differences of opinion regarding its interpretation and value. It is not without its fallacies, but if these are known and the result of the Wassermann test is compared with the clinical symptoms, few cases will leave doubt. A definite diagnosis of syphilis should not be based on a single positive Wassermann in the absence of clinical evidence, especially if the reaction is weakly positive. On the contrary, however, a negative Wassermann is commonly found in cases whose clinical symptoms and history are distinctly those of syphilis. In either case the test should be repeated at least once and in those cases presenting symptoms of syphilis with a negative Wassermann recourse may be had to a spinal fluid examination, or the provocative use of salvarsan.

A Wassermann test should be made on all chronic cases with ill-defined etiology, and on all cases of heart disease, aneurism and other cardio-vascular disturbances.

Presenting a case with a suspicious appearing sore on the genitals, a search for spirochetes should be made at once. A good rule to follow is to consider every genital sore syphilitic until proven otherwise. History of promiscuous sexual indulgence or the length of incubation of the chancre should not influence the diagnosis for they are not reliable. Demonstration of the spirochetes is best accomplished by means of a specially devised dark field attachment to a microscope and an arc light. A drop of serum from the sore is diluted with a drop of normal salt solution on a slide and the search made. Considerable time may be required before the organism is found and if not found the first time the search should be repeated time and again. The patient should be given a normal salt solution with which the ulcer is to be kept clean until a definite diagnosis is made. No caustic or antiseptic of any kind should be applied, as they will decrease the possibilities of demonstrating the organism with the dark field, obliterate the true nature of the sore, and in many cases will result in the patient later developing some destructive syphilitic process. The India-ink dark field, while not as reliable as the specially devised apparatus, is many times sufficient and should come into more general use, because it is inexpensive and easy to use. Its chief draw back is that the ink contains bodies similar to the spirochetes, but a little practice will enable one to differentiate them.

There is now no excuse for application of the old slogan "wait for the secondaries." To do so means to wait for a "spirochetaemia" with penetration of the infection to the more remote tissues, where irreparable damage may be done and from which their final eradication may require years of the most painstaking treatment. Fordyce has shown that involvement of the nervous system takes place early in the secondary period.

A better way then, to cure our locomotor ataxia and other types of cerebro-spinal syphilis will be to prevent them whenever possible: i. e., abort the disease while still in the primary stage.

If the diagnosis is made by means of the dark field and the lesion is so situated as to permit of its removal this should be done. If not so situated 33⅓% calomel ointment should be vigorously applied twice daily. The patient is then given from three to six full doses of salvarsan two to five days apart, depending upon his tolerance of this preparation and this is followed by ten deep injections of mercury. This treatment carried out before the Wassermann has become positive will, in the majority of cases, abort the disease, but it is well to keep the patient under observation and make repeated Wassermann tests for at least a year.

We may wonder why prolonged treatment with both salvarsan and mercury is necessary for a cure in the late cases when a few doses of salvarsan will cure the early ones. In explanation of this fact two theories are offered: (1) that in the late cases the spirochetes have penetrated to the more remote tissues, which are poorly supplied with circulation and where an adequate amount of salvarsan does not reach them, or (2) that they have developed a spore or encysted type which resist the action of salvarsan and later develop to reinfect the blood stream.

This latter theory holds the weight of opinion. Accepting this theory we have an explanation for our system of treatment, which even before the discovery of the spirochet or salvarsan, was known to be most effective; i. e., intermittent treatment. Years of experience have shown that this method of treatment will cure more cases than when carried on without intervals of rest. A definite course of treatment will destroy adult organisms and during the rest from treatment the resistant type develops and is destroyed by a second course of treatment and so on to the cure.

Fixed rules of treatment cannot at all times be adhered to in the later cases, but if the general principles are definitely in mind deviation from them in individual cases may be made as requirements demand.

During courses of treatment with mercury this drug should be pushed to the point of tolerance in all cases. Its internal use in the form of pills is to be condemned at all times.

The two best ways to administer mercury are by deep injection and by inunctions. Each has its advantages. Inunctions are preferable in children but in adults deep injections are most satisfactory. With either it is possible to bring about a rapid maximal effect.

Schamberg has recently shown that calomel is equally as readily taken up by the skin as the gray powder, and because of the difference in cleanliness is much nicer to use. The salicylate is the preparation of choice for deep injections and may be given in doses of from one to three grains once a week.

Potassium iodide has no direct effect on the spirochetes but is of distinct value in dissolving the cellular infiltration of a syphilitic process. It is best used during the rest period prior to a course of treatment with salvarsan and mercury.

The treatment of these late cases should be given in courses with periods of rest, three or four injections of salvarsan followed by eight to ten deep injections of mercury constituting a course. This course to be followed by a rest period of four to eight weeks.

During the first year of treatment not less than three such courses should be given. After the first year the number of courses and the number of injections in each are to be determined by the Wassermann findings. In the absence of clinical symptoms the Wassermann is the best indicator of the effects of treatment and should be made from time to time during the treatment.

Salvarsan should be given to all patients with syphilis unless there is a contraindication. These contraindications are to a great extent only relative and the drug can be used in practically all cases if proper caution is used. Chief among the contraindications are severe types of cardio vascular disease, nephritis, pulmonary tuberculosis, iritis and meningitis. Fortunately the rapidly fatal reactions, which are probably due to odema of the brain or respiratory organs, are extremely rare and it is well to remember that they respond readily to a hypodermic of adrenalin.

In administering salvarsan it should be remembered that neuro-recurrences commonly follow the giving of a single dose, and if it is to be used at all not less than three doses should be given. It is of special value in cases with mucous patches, condylomata, etc., where rapid results are needed. The urine and heart should be examined in all cases before the administration of salvarsan and at least once a week while the patient is under treatment with mercury.

There is now an ample supply of the American made product, which appears to be equal to the old German product therapeutically and is of low toxicity. It should be diluted in the proportion of .1 gm. to 20 c.c. of freshly distilled sterile water and is given in doses of .1 gm to each 30 lbs. of body weight, with a maximum dose of .6 gm.

While mercury alone will remove clinical symptoms in some cases and also render a negative Wasserman, experience has shown that the combined use of mercury and salvarsan gives more certain results, and from a serological standpoint mercury cannot be depended upon for permanent results.

The prognosis of syphilis of the nervous system is always bad. Many times the treatment gives brilliant results but the chances for a cure are not good. The treatment of these cases is a matter of everything to gain and nothing to lose and often times results in at least the temporary improvement of symptoms and the prolongation of life. As previously stated, if we will treat our early cases intensively and follow them up to a cure, then our successors in the coming generation will not be confronted with this unsatisfactory condition.

The determination of a cure is not always an easy matter. A few cases will be cured with a minimum amount of treatment, but it is much safer to over-treat than to undertreat. The best index to the condition of the patient is the Wassermann reaction. Following a prolonged period of treatment if the Wassermann is negative and remains so for several months without treatment, is also negative after a provocative injection of salvarsan and the spinal fluid examination is negative it is safe to pronounce a cure.

It is well, however, to have the patient report for a Wassermann at least twice a year for several years following the treatment.

(1) Edward A. Vedder: The Prevalence of Syphilis in the Army; Bulletin No. 8 office of the Surgeon General, June, 1915.

---

## Roentgen Diagnosis of Carcinoma of Stomach, Colon and Rectum.*

A. F. Tyler, B. Sc., M. D., Omaha.

In a paper confined to such a brief time as this must be, it will be taken for granted that we all have clearly in mind the roentgen anatomy of the normal stomach, colon, and rectum. Certain salient features, however, had best be reviewed for the sake of clearness. It is common custom to examine the stomach roentgenologically with the patient in the standing position, watching on the fluorescent screen the opaque meal enter the stomach. The empty stomach collapses, throwing the walls together, except at the cardia where a small gas bubble is constantly found, the "magenblase" of the Germans. As soon as the opaque meal enters the stomach, this funnel shaped area at the cardia fills, then the opaque media trickles down to the pyloric end of the stomach (canalization), then as the patient continues drinking, the stomach fills from the bottom upward until one visualizes the normal filled stomach. Because we observe the patient in the vertical position, the position and contour of the barium filled stomach differs slightly from the stomach of the cadaver or the anesthetized patient. Allowance must accordingly be made in one's interpretation of the findings. The stomach fits the inside of the body like the clothing fits the outside of the body, so that patients of a slender habitus (visceroptotic) have a long slender stomach, while a stout patient will have a transverse stomach placed high under the diaphragm. The author has frequently observed the body of the stomach higher than the duodeum, so that the greater curve appeared on the upper surface. What difference does it really make whether the stomach is high or low if it does its work properly? The long slender stomach of the patient of long slender build may be doing its work equally as well as the transverse stomach of the stout individual. From a roentgenological standpoint the normal stomach is one which is suited in shape to the patient in hand, one which fills as described above, one which has a soft pliable wall as determined by visualized palpation, one which has the normal capacity and contour and which empties in normal time. When one uses the barium and buttermilk meal, the normal stomach will be empty in six hours, any residue remaining at that time being considered pathological. There are certain pathological conditions which interfere with or alter the emptying time of the stomach. Some of these conditions viz., ulcer of the duodenum without stenosis, ulcer near the cardia, achylia, subacitidy or indurated pylorus, will hasten the empting time, shortening it to even a few minutes. On the other hand, certain other conditions viz., stenosis of the pylorus, benign or malignant, pylorospasm, or atony will delay the emptying time beyond the normal limits.

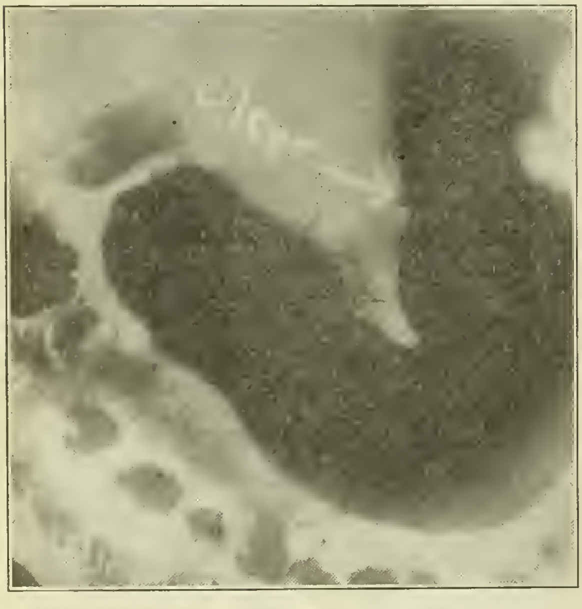


Figure 1. Ulcer of the stomach. Note the ulcer crater on the lesser curve at site of the arrow and the incisura opposite on the greater curve. This incisura is caused by a spasm of the circular muscle fibers which pass through the ulcer crater. Proven at operation.

Not only is the motor function of the stomach interfered with by pathology but the pliability of the gastric walls may be altered. This condition can be demonstrated by visualized palpation and by watching the peristaltic waves. When the normal stomach is palpated the walls are soft, pliable and the opaque contents can be pushed about at will. Where induration has occured, this elasticity is lost and the peristaltic waves do not appear in that portion of the stomach involved.

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

The indurated area will also cause a change in the contour of the stomach. There may be a rather extensive stiffness of the wall (infiltrating carcinoma) with only slight encroachment upon the lumen or there may be a localized area with marked change in the size of the lumen, proliferative carcinoma. These changes are definitely different from the nische and persistent incisura of gastric ulcer which shows as though someone had tied a piece of twine tightly about the stomach, cutting it almost in two.

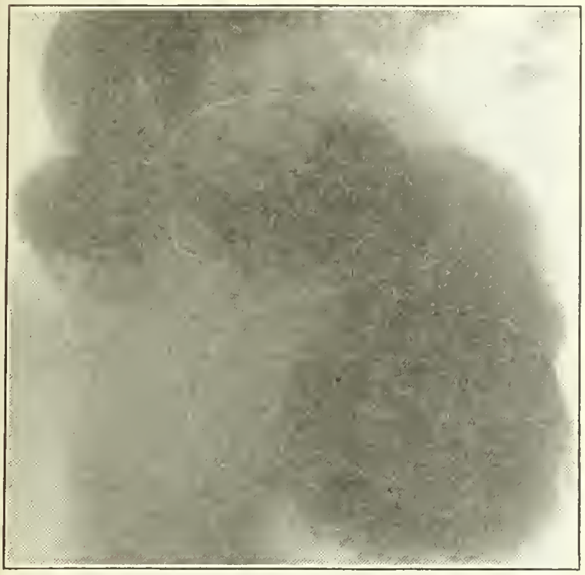


Figure 2. Lobutated carcinoma of the stomach. Note the infiltration of the wall as shown by the marks which represent the outer wall of this stomach. Proven at operation.

The roentgen findings in carcinoma of the stomach are so definitely positive that ninety five per cent of gastric cancers* can be found in this way. We do not advocate the replacing of other methods of examination by the roentgen ray but we do wish to emphasize the importance of using this valuable aid along with all other methods as a routine, for by what other method can we duplicate the percentage named above?

The roentgen findings in gastric carcinoma consists of change in motility, stiffening of the gastric walls and encroachment upon the lumen of the stomach. All of these findings can be demonstrated when growth is small and before extensive metastases have occurred. Of course patients, as a rule, come to the physician only after a long period of so called indigestion with pain. Usually, only when the pain enters the symptom complex do the patients think the condition serious enough to warrant consulting a physician. If the physician then waits till he can feel a mass he had as well sign the death certificate, except in the exceptional case, for more than thirty-three per cent of gastric cancers are not palpable. These cases of "indigestion" in patients above the third decade deserve roentgen examination as a routine to rule out the presence of carcinoma, if for no other reason.

Gastric carcinoma is best divided into three types as visualized roentgenologically, viz., 1. the proliferative, 2. the infiltrative and 3. the mucoid.

The proliferative is really the lobulated or cauliflower like growth springing from a localized area of the inner wall of the stomach and encroaching on the lumen. If located near the pyloric sphincter, this type may produce gastric obstruction. This type is most often found in the pars pylorica but occasionally is found in the pars cardiaca. It is usually a local growth but is sometimes annular, involving a band of stomach wall throughout the entire circumference.

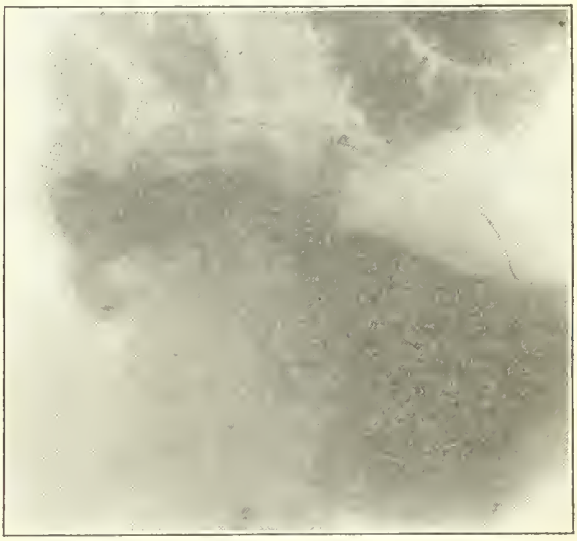


Figure 3. Infiltrative or Scirrhus carcinoma of the stomach. Four-fifths of the stomach is involved. Proven at operation.

The infiltrative type is representative of the scirrhus carcinoma. It produces an extensive induration of the gastric wall with only moderate encroachment upon the lumen. Unhappily, this type of carcinoma has such an insidious onset that the patient usually consults the physician when one half to four fifths of the gastric wall is involved. If the patient presents himself, a careful roentgen examination will reveal the growth when very small and freely movable and before metastases have occurred, so that resection would be helpful.

---

*Carman and Miller, Mayo Clinic.

The mucoid type of gastric cancer is the degenerative stage and may occur in either the proliferative or infiltrative type.

Just as in carcinoma of the stomach, carcinoma of the colon is recognized by a change in contour. This change in contour is best recognized by using both the opaque meal and the opaque enema. Where there is obstruction, the opaque meal will reveal a dilatation proximal to the site of the growth, while the opaque enema coming up from below will reveal the exact extent of the filling defect. Usually, the indurated area in the bowel wall is not sharply marked off but occasionally one sees the annular type of carcinoma which looks as though a napkin ring had been clamped about the colon. One must be careful in his technic in gastric examination, but must use especial care in examination of the colon and rectum. This care is necessary to rule out any of the artefacts which may be misleading . The filling defect of carcinoma of the colon may be simulated by

1. Gas.
2. Insufficient enema.
3. Fecal matter.
4. Spasm.
5. Extrinsic tumors.
6. Pressure of bony parts.
7. Adhesions.
8. Diverticulitis.
9. Tuberculosis.
10. Syphilis.

The technic which has proven most satisfactory in the author's hands is to have the patient take a soapsuds enema until the colon is entirely empty. When the patient reaches the office, an opaque enema is given with the patient lying on the roentgen couch where the entrance of the enema can be watched. After fluoroscopic examination has been completed, plates are made. Then an opaque meal is given and followed through in the usual manner. The use of castor oil purgation has been discontinued because of the large amount of gas present after its use, and because the patients were left so sensitive that they could not retain the enema.

If the carcinoma is located in the colon above the sigmoid, very often one can palpate the mass and see the filling defect simultaneously. This makes the location certain and helps to rule out any other condition. Where the sigmoid or rectum is involved, it has proven necessary, in our hands, to make stereoscopic plates as well as the usual fluoroscopic examination. It would seem then that we are justified in drawing the following conclusions:

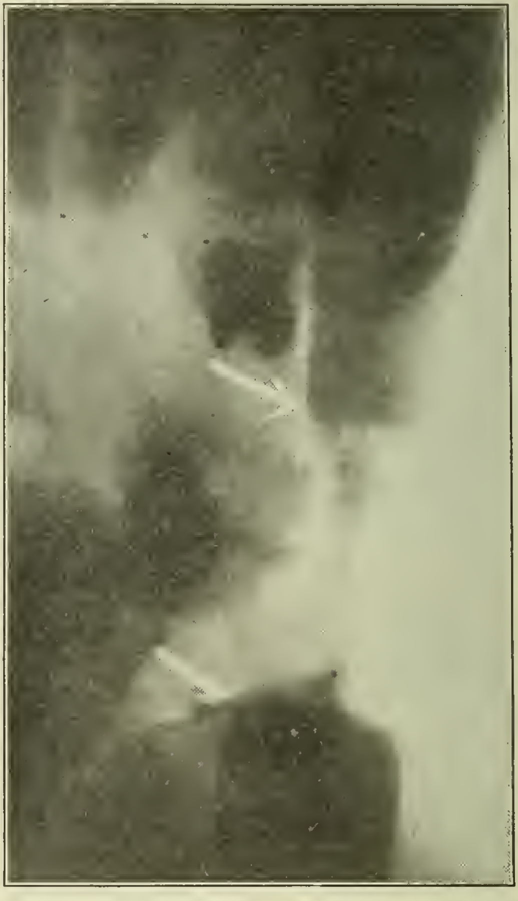


Figure 4. Carcinoma of the discending colon the "napkin ring" type. The arrows point to the extent of the growth. Proven at operation.

1. The roentgen examination will reveal a much larger percentage of new growth of the stomach, colon and rectum than any other single method.

2. The roentgen examination of the stomach, colon and rectum should be made as a routine in conjunction with other methods.

3. Careful technic is a fundamental requirement.

4. A thorough knowledge of anatomy, physiology, pathology and medicine is essential to proper interpretation of roentgen findings.

## Case Reports.

### Carcinoma Head of Pancreas.

A. Sachs, M. D., Omaha.

This case was referred from the surgical department of St. Joseph's Hospital, for a jaundice which followed soon after a herniotomy for a right inguinal hernia.

Name, Mr. J. Age 44. Occupation, cabinet maker. Nationality, Bohemian.

Complaints: Vague abdominal pains. Jaundice.

Present illness: Patient first noticed that he had loss of appetite and more or less general disgust for food. He had indefinite abdominal pains which he could not accurately describe on account of difficulty in using the English language. When I first saw him, the pain was of moderate character, more or less deep-seated over the entire upper half of the abdomen. It was dull in character, and had no relationship to the time of eating, except that at times, it was increased after eating, especially the heavier foods. At times the pain was referred to the back; was not relieved by pressure; was more or less of constant character. As the disease progressed the pain became more severe; was localized in the epigastric area; was constantly referred to the back; and required large doses of opiates before any relief was obtained. In the beginning there was no vomiting. Later, the patient would vomit at intervals which had no bearing as to the time of the taking of food. Vomitus was bile-stained, and only at times contained food particles. Vomiting did not relieve the pain.

As the case progressed, the vomiting was more frequent, and at times contained some food particles. Patient was constipated. The stool was formed. In the beginning, it was of normal color, but later on, at times was clay-colored. The constipation was increased on account of the large doses of opiates used. There was very little bloating, and some belching. Belching did not relieve the pain. As the disease progressed, the patient lost considerable weight. The jaundice in the beginning was very slight. At times it increased, then became slightly less, but in the latter stages, constantly increased.

Family history: Negative.

Past history: No serious illness to patient's knowledge, except blindness in his right eye. Denied veneral infection.

Personal history: Tobacco, moderate. Alcohol, moderate. Tea and coffee, moderate.

Systems: Respiratory, slight cough. Otherwise negative. Cardiac, negative.

Genito-urinary, passed increased amount of urine during day and night. Some burning. Otherwise, negative. At no time contained sugar.

Nervous, negative.

#### Examination.

On the first examination, sclera slightly icteric. Right eye, loss of vision, cornea dull and opaque. Pupils react to light and accomodation, otherwise head and neck negative.

Chest: Narrowing of Kroenig's field on the left side. Movability, left side somewhat impaired Probably an old tuberculosis. No signs of any active lesion.

Abdomen: Negative, except for some slight deep-seated tenderness in the epigastrium. A mass felt on right side of the scrotum, more or less indurated character. As the disease progressed the patient became more emaciated, and a resistance was felt in the right upper quadrant. At no time could any definite tumor mass be palpitated. Extremities: Negative.

Course: The patient progressively became worse, gradually lost weight, and jaundice toward the end stage, markedly increased.

Laboratory findings:

Wassermann, negative.

Gastric, free HCL 23; total acidity 60.

Stool, occult blood, positive.

Urine, negative, except for slight trace of albumin. Few hyalin and granular casts.

Leucocytes, 12,000.

Trypsin test on stool, trypsin slightly decreased. Several examinations, same result. Galactose test, forty grams given, negative.

Duodenal tube passed, but on account of inability of patient to cooperate, of no avail.

Clinical diagnosis: Carcinoma of head of pancreas and the ampulla of Vater; Old tuberculosis of left apex.

Autopsy was performed by Dr. Heagey.

#### Findings.

General appearance: Patient appears to be sixty years of age, is deeply jaundiced especially about the face and sclera, and is considerably emaciated, no bed sores present. The skin is pitted with numerous petechiae, especially on the abdomen and forearms. The left pupil is larger than the right. Incision, a median incision is made, and on opening the peritoneal cavity a large amount of bile-stained fluid containing large shreds of viscous mucoid material exuded. The intestines were markedly distended and pale, with absence of appendices epiploices.. The greater omentum is emaciated and adherent to the old scar in the right inguinal region. To this scar also are adherent the peritomeal covering of the bladder and the caecum, in which latter is found a large nodular cartillagenous mass. The transverse colon is greatly dilated, stomach is quite contracted with scarring in the middle with dilitation of the cardiac and pyloric ends being almost hourglass in appearance. The pylorus, the gallbladder and the head of the pancreas are all involved in a large indurated mass. Some small nodules are felt in the right lobe of the liver. On stripping the intestine the hepatic flexure of the transverse colon is also found to be involved in this growth.

Spleen is small and atrophic, about two-thirds normal size, greyish, and exanguinated.

Liver: The lower outside border of the right lobe is strongly adhered to the right abdominal wall, the entire upper surface of the right lobe is adhered to the diaphragm, and over its surface are felt many small nodules; the left lobe is greatly atrophied and the liver as a whole is reduced to one-third normal size. The lower surface of the liver is almost entirely occupied by the gallbladder, which is distended to five times its normal size, and its walls are thickened and contain large yellowish-white areas of induration. Near the inferior surface of the gall-bladder, is a large cavity which on accidental opening, is found to contain thick, brownish fluid and its surface lined with nodular fibrinous tissue. In this cavity are found eggshell-like plaques.

Pancreas: The tail is reduced in size and extremely fibrous. Its nodules standing out prominently. The head is adhered to the gall-bladder, pyloris, kidney and duodenum, being lost in this general mass. Being unable to free the head of the pancreas, an opening is made in the pyloric end of the stomach, and on trying to feel for the ampulla of Vater, the finger protruded through the cavity originally opened at the lower pole of the gall-bladder, which appeared to be an ulceration through the duodenum. Passing distally from this cavity was the lumen of the duodenum.

Thorax: On opening the chest we find no fluid, but dense adhesions are found, especially in the left side. The left apex is adherent and contains a firm, hard nodule. The base of the right lung is firmly adherent to the diaphragm.

Pericardium and heart: Opening pericardium a small amount of fluid is found; there is a marked absence of epicardial fat, the heart is markedly atrophied, being about two-thirds normal size. Right ventricle is collapsed and atrophied; tricuspid valve admits tops of three fingers and presents no vegetations. The pulmonary valve is O. K. The left ventricle is found in tight systole, and on opening the mitral valve, is found covered with vegetations. The heart muscle as a whole, is of brown hue.

Anatomical diagnosis: Carcinoma at the head of the pancreas, and ampulla of Vater, and involving the common duct.

### 159 Men are Landed Sick and Wounded from Oversea Forces.

Official U. S. Bulletin, Aug. 8.

The War Department authorizes the following statement from the office of the Surgeon-General:

During the week ended August 2 the number of sick and wounded landed in the United States from the American Expeditionary Forces was 159. These men were sent to the various Army Hospitals, where facilities for treatment and physical reconstruction have been provided.

### President Wilson in Favor of Keeping Up The Schools.

Official U. S. Bulletin, Aug. 7.

President Wilson urges generous support for schools of all grades during the war time. In a letter to Secretary Lane approving the Bureau of Education's plan for an educational campaign this summer and fall, he says:

"I am pleased to know that despite the unusual burdens imposed upon our people by the war they have maintained their schools and other agencies of education so nearly at their normal efficiency. That this should be continued throughout the war and that, in so far as the draft law will permit, there should be no falling off in attendance in elementary schools, high schools, or colleges is a matter of the very greatest importance affecting both the strength in war and our national welfare and efficiency when the war is over. So long as the war continues there will be constant need of very large numbers of men and women of the highest and most thorough training for war service in many lines. After the war there will be urgent need not only for trained leadership in all lines of industrial, commercial, social, and civic life, but for a very average of intelligence and preparation on the part of all the people. I would therefore urge that the people continue to give generous support to their schools of all grades and that the schools adjust themselves wisely as possible to the new conditions to the end that no boy or girl shall have less opportunity for education because of the war and that the Nation may be strengthened as it can only be through the right education of all its people. I approve most heartily your plans for making through the Bureau of Education a comprehensive campaign for the support of the schools and for the maintenance of attendance upon them, and trust that you may have the co-operation in this work of the American Council of Education."

## Enlarging Sewage Plants at the Army Cantonments.

Official U. S. Bulletin, Aug. 7.

The War Department authorizes the following:

The increased number of troops in camps and cantonments has made necessary the enlarging of the sewage disposal plants. Instructions have been given to the Construction Divison of the Army and undertake the work immediately. The average cost at each camy will be about $40,000.

A committee of sanitary engineers from the Construction Division and the Sanitary Engineering Section of the Surgeon General's office inspected the plants and reported that to properly safeguard the health of the troops and the civilian population enlargements and alterations of the present plants must be made.

Measures are being taken to correct the most pressing defects while the work of enlarging the plants is being done.

## Tuberculosis and the Wassermann Reaction.

H. J. Corper, of Chicago, published in the American Review of Tuberculosis, for July, the results of Wassermann reactions with over 2,500 sera of tuberculous patients. He reviews the more recent literature dealing with the Wassermann reaction among different groups of people, including the tuberculous. He himself reports that among 1,395 men and 1,399 women residents of the city of Chicago Municipal Tuberculosis Sanatorium, a definite positive Wassermann reaction was obtained in 7.2% of the men and 15.8% of the women.

The incidence of a definite positive Wassermann reaction as far as this could be determined, did not reveal any striking differences from the above figures resulting from a classification of the cases according to different ages or different nationality, or race.

Corper, H. J., The Results of the Wassermann Reaction in a Tuberculosis Sanatorium, Am. Rev. Tub.. 1918, Vol.2 No. 5.

The democratic method—the correct method—to raise an army is compulsory selective service. The Journal, however, has always opposed—and would continue to oppose—a compulsory draft of physicians alone. Such a procedure would be against the spirit of the Constitution of the United States; it has been, is, and would be in the future, uncalled for and an insult to the profession. But a compulsory selective service of all men, which would include physicians, is ideal. It is for this reason that The Journal rejoices in the fact that Congress is finally seriously considering raising the draft age to 45 years. There will be opposition, of course, and it is possible that the maximum age will be reduced below 45. It is to be hoped not.

The military commander of the Panama Canal territory has taken vigorous steps to protect the soldiers under him. Since June 18th no alcohol or drugs may be possessed, given away, used or carried through the canal zone. The order affects the American garrison, 6,000 civilian Americans, and 20,000 natives. After protesting in vain, with civic authorities of Panama and Colon against the saloons, gambling houses, dives and houses of prostitution which were living off the soldiers, the commander forbade the soldiers entering these cities until these evils were banished.

### War Work for Young Women.

The Surgeon General's Office, War Department, has issued an urgent call for young women to serve in reconstruction hospitals at home and abroad. The Normal School of Physical Education, Battle Creek, Michigan, which is affiliated with the Battle Creek Sanitarium, wishing to do its share toward winning the war, has inaugurated a course in physiotherapy, which meets the requirements of the War Department. Courses begin Oct. 1st and Feb. 1st. Length of course is 4 months. The cirriculum consists of Anatomy, Physiology, Hygiene, Bandaging, Active and Passive Movements, Hydrotherapy, Massage, Electrotherapy and Clinics.

The medical profession are asked to direct the attention of young women who are planning to engage in war work to this unusual opportunity.

Further information may be obtained from Frank J. Born, M. D., Director of the School.

# THE NEBRASKA STATE MEDICAL JOURNAL

Published monthly by The Nebraska State Medical Association.

J. M. Aikin, Managing Editor....Omaha
A. F. Tyler, Associate Editor....Omaha

Committee on Journal and Publication.

F. A. Long, Chairman....Madison
W. O. Bridges....Omaha
B. F. Bailey....Lincoln
J. M. Aikin, Ex officio....Omaha

Subscription $2.00 Per Year. ..Single Copies 20c Each

All communications should be addressed to
The Nebraska State Medical Journal,
476 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. III. September, 1918. No. 9

## Enrolling Physicians for Government Service.

If in the minds of a few there lingers a belief that our government has all the men needed for the Medical Reserve Corps, that misinformation is no longer excusable. Recent calls from the Advisory Committee of our Council of National Defense urging renewed efforts on our part to enlist more doctors in the service corroborate the wisdom of even greater activity through our councilor district war committees for a complete survey and classification of our profession in readiness for immediate response when called. The prompt voluntary and cordial support given by our councilors and county societies in cooperative action is abundantly verified by the long list of favorable answers printed elsewhere in this issue of the Journal. These doctors simply say we are ready when called to serve our government wherever our services are most needed. That list does not include those already on our honor roll. It is the duty of each councilor district war committee to know the civil, industrial, and educational necessities of their district, make a tabulated list of their forces, and recommend accordingly for government control, either in the Medical Reserve Corps, U. S. Army, or for Volunteer Medical Service Corps work at home. They should designate their eligible and available men for Medical Reserve Corps duty, so that when our government ask for more doctors our State War Committee can immediately notify the proper men to make application and present themselves to the authorized official for examination and recommendation, for a commission in the Medical Reserve Corps, U. S. Army. All not listed as eligible and available are expected to immediately make their application to the member of the Volunteer Medical Service Corps Board nearest resident to the applicant for examination and induction in the home service under government control.

---

We are asked: Is it advisable to continue the plan we are working, in view of the prospective change in draft ages? Will those physicians who are within draft age be prevented from enlisting? To this we answer in the following language taken from the Official Bulletin, Washington, D. C., of Aug. 12 issue:

"Orders issued by the war and navy departments on August 8 suspending further volunteering and the receipt of candidates for officers' training camps from civil life do not apply to the enrollment of physicians in the Medical Reserve Corps of the Army and in the reserve force of the Navy.

It is the desire of both departments that the enrollment of physicians should continue as actively as before so that the needs of both services may be effectively met.

Josephus Daniels, Secy. of the Navy.
Newton D. Baker, Secretary of War.

We are not vested with legal powers—civil or military—as councilor, state, or national war committees. Our plan is simple, inexpensive as to money or time, systematic and fair to all.

Patriotism shown by deeds in loyalty to our flag with justice to the medical necessities of our communities, controls the noble men now so numerous and active in unselfish service under our government, in ministering to suffering humanity.

## Physicians in War.

In the July number of the Journal we published a statement of physicians recommended for commissions in the Medical Officers' Reserve Corps of the United States Army. This list was made up of the total number of physicians in each state throughout the Union, giving the percentage of those who had been recommended for commissions in the M. R. C. On August 1st there had been reported to this office a total of 404 physicians recommended for commissions. This makes a percentage of 25.7 for Nebraska. If an average of 20 per cent of the medical population throughout the entire United States should be required for military service this year, Nebraska has already exceeded her quota. On July 1st the total average for United States, including the District of Columbia, was a little more than 17.3 per cent. If the other states have increased their enlistment in the same ratio with Nebraska, the total average at the present time would be 18.7 per cent. This leads us to think that there is still considerable need for active enlistments in the Medical Reserve Corps and accounts for the activity of the American Medical Association in this regard. The proposed law, drafting men from 18 to 45 years of age, will of course take practically all of the medical men suitable for military service. In anticipation of this bill becoming a law, the government has issued an order stopping enlistments of civilians for the officers' training camps, with a special order, issued under date of August 12th, by Secretary of War Baker and Secretary of Navy Daniels, saying that the medical men would not be forbidden to enroll, but that it was the desire that physicians should continue to apply for enrollment in the M. R. C. of the Army and Navy, so that both of these services may have sufficient medical men to care for the increased number of men in the Army and Navy. It is in accord with this order that the Nebraska State Medical Association War Committee is continuing active in the organization of the so-called Nebraska plan for the enlistment of physicians in these two branches of our national war service.

---

The members of our State Executive Committee in charge of Volunteer Medical Service Corps' matters are:

| | |
|---|---|
| Anderson, A. B. | Pawnee City |
| Bridges, W. O. | 420 Brandeis Bldg., Omaha |
| Bailey, Benj. F. | Lincoln |
| Bowman, L. W. | Alliance |
| Hildreth, M. L. | Lyons |
| Raynor, W. J. | Grand Island |

Recently one physician in each county was appointed to supply members of the profession in his county with Volunteer Medical Service Corps' blanks. These blanks are to be obtained from the member of the State Executive Committee in charge of Volunteer Medical Service Corps' matters nearest his county.

This is strictly Volunteer Medical Service Corps' work and has nothing to do with Medical Reserve Corps work, although in counties where the member of the Councilor District War Committee was over 55 years of age, he was appointed to distribute the Volunteer Medical Service Corps' blanks.

---

## The Medical Profession and the War.

(August 10, 1918, American Medical Association Journal)

More than 25,000 physicians have accepted commissions in the Medical Department of the Army, and at least 2,000 more are in process of being commissioned. Adding to this number in the Navy, we can estimate that over 29,000 physicians have volunteered and are now either in active service or subject to immediate orders. The 5,000 asked for last May have been supplied; another 5,000 will be called for immediately, and probably still another 5,000 later on. It is now generally believed that the present plan is to raise an army of 5,000,000 men as soon as possible. This means at least 35,000, if not 40,000 medical officers. The way in which our profession has already responded to the call of the Surgeon General demonstrates both the patriotism and the proverbial unselfishness of the average medical man. No doubt the same spirit would supply the 40,000. But this voluntary method of furnishing the Army with medical officers is as unfair and as unsatisfactory as would be the same method of supplying the necessary personnel for the fighting force.

---

The physician who is prompted by a purely altruistic spirit, the one who is always willing to make sacrifices for his country, the one who is willing to give up a position attained through years of endeavor for the good of the common cause—these are the men who have been coming forward from the first, and who will continue to come forward. The man who wants to utilize the opportunity to make money, the man who would capitalize the sacrifices of a confere, the idolent—these find it possible to explain—to themselves—why they do not volunteer. There are, of course, those whom the Surgeon General's office will not commission because it knows of justifiable exempting circumstances. There are those whose entrance into the service will be a distinct loss to their communities and, in the final analysis, to the government.

If the new draft bill becomes a law, it will help to solve the problems that now face those who are interested in the health conditions of the country. There never has been any doubt that the number of physicians necessary for the Army would be forthcoming. There is the other side, however, and that is that the voluntary system is likely to deplete certain communities. It has already seriously affected certain hospitals and medical colleges. Sanitariums, health officers and other officials who were doing important work in civilian life have entered military service, thus leaving vacant very important public health positions. The provost marshal general's office is bewailing the fact that a large number of medical men connected with the local, district and advisory boards are giving up this work to enter military service. With the compulsory selective service age increased to 45, there remains only the question of devising methods of procedure to utilize the medical man power thus made available to the best interests of the military forces and of the civilian population. Because of this, The Journal welcomes the conscription of the active man power of the entire nation, a method which is not only democratic, but has proved itself eminently fair and equitable to all concerned.

## New Regulation for Venereal Disease Reports.

(Taken from the California State Journal of Medicine)

A patriotic appeal is being made by the Bureau of Social Hygiene of the State Board of Health to every California physician. More physicians must become interested in reporting syphilis and gonorrhea. In order to accomplish this and in order to aid the physicians to control infectious cases the State Board of Health has adopted the West Australian method of reporting these diseases.

An explanatory letter is being sent to each physician and notification cards are in the hands of Health Officers for distribution. Card A bears a serial number which the physician is requested to incorporate in his case history. It is sent to the State Board of Health bearing only the number and some facts concerning the case. The card is perforated and half of it is given to the patient so that he may understand the physician's legal responsibility. If the patient does not return for treatment and if the physician has not been informed by another physician that the patient is reporting to him, then the first physician reports by means of Card C to the State Board of Health, the name and address of the patient, who is then liable to quarantine.

Pamphlets instructing the patient concerning the nature of the infections have been prepared. Physicians are requested to give to each patient one of these at the time of the first visit. The pamphlets may be obtained in any number from the health officers, the State Board of Health or the Bureau of Social Hygiene.

No.............................(For the Patient).

Remember this number and follow instructions.

You are given this pamphlet of instructions with this serial number by your doctor because the law required him to do so and to report your case to the Health Officer by this number **without revealing your name.**

If you change doctors for any reason and wish to keep your name concealed you must see to it that the doctor you last consulted notifies the doctor previously having charge of your case within **ten days** (10 days).

If you fail to come for treatment at the time ordered by your doctor within the period in which your disease is infective and he does not receive notice with **ten days** from another doctor, stating that you have placed yourself under his professional care, the doctor giving you this pamphlet is obliged by law to report your **name and address** to the health authorities as a person suffering from a disease dangerous to the public health and presumably not under proper medical advice and care sufficient to protect others from infection. You will then be liable to quarantine or such other procedure as the Board of Health may determine. If you want your name kept secret, follow these instructions carefully. Your doctor will tell you when your case is no longer infectious.

No.............................................Card A.

**Physician's Report of Case of Gonorrhea or Syphilis.**

(Strike out gonorrhea or Syphilis as the case may be)
Make the Serial Number a Part of Your Case Record.
Date..................................................19.........

............ ..................................................Cal.
City or Town

Age.................... Sex...................... Color.......................

Martial Relation .........................................................

(Single, married, widowed, divorced)

Occupation...................... Date of Infection....................

Commercial or clandestine prostitute—Address if investigation is indicated.

Was patient intoxicated at time of exposure?.............

Unemployed? .................................................................

Is patient in infectious state of disease?......................

If so, is patient likely to infect others?..........................

Has this case been previously reported?........................

Under what number?.......................................................

Has diagnosis been confirmed by laboratory test?......

.................................................................................

Wassermann, smear for gonococci or spirochete.

.................................................................................M. D.

Mail this card immediately to the State Board of Health, Sacramento, and in addition report the case by number to your local health officer.

## Some Statistical Results of the Psychoanalytic Treatment of the Psychoneuroses.

Coriat has sought to meet the criticism that psychoanalysts present no statistical results of their work. His results are from cases in which only complete psychoanalysis was done. The cases which he finds amenable are principally severe hysterias, compulsion neuroses, sexual neuroses, stammering, anxiety neuroses and certain psychoses such as the paranoiac states, manic-depressive insanity, and dementia praecox. Failure of recovery was due to incomplete transference (resistance), inability to break down disturbing complexes, unwillingness on the part of the patient to give up the neuroses. The progress and result were marked by the disappearance of the neurotic symptoms best shown in the change in the character of the dreams. With homosexual individuals, which showed a large proportion of cures, the dreams would change to a distinct heterosexual character, from a previous disturbing homosexual nature. The recovery depends largely on the emotional transference, and since this is successful in hysterias, compulsion and anxiety neuroses and homosexuality, these show a large number of recoveries. In stammering the transference was difficult and therefore no complete cure was attained. The results in dementia praecox lead to the conclusion that psychoanalysis may be quite effective in treating early or latent cases. Here as in other psychoneurotic and psychotic forms of disturbance, the treatment is based upon a psychodynamic conception of the disturbance and mechanisms through which it has been produced. These statistics prove psychonalysis an effective therapeutic procedure in cases where other forms of therapy have been tried in vain, such being the author's experience in a number of instances. Recovery and improvement were found to be due to the actual use of the psychoanalytic technique and not through any method or rational explanation or reeducation of the symptoms, reaching to the basis of the disturbance by penetration into the unconscious rather than teaching or training the individual to evade his disturbance.—(Taken from the Journal of Nervous and Mental Diseases, June, 1918).

## Communications.

### Richardson County Baby Contest.

I notice in the Nebraska State Fair premium list that a Better Babies contest will be held this year along lines similar to those in the past. I have no criticism to offer for I know great good has been done, and more interest in child welfare work created through these contests.

However, I do believe this work could be augmented by creating a clinic for the poorer babies where advice could be given and treatment recommended. If we are to save child life as the government urges, we should not spend all our time in praising the better babies, but lend more effort toward correcting the defective and strengthening the weak.

For the past two and a half years we have been directing a sort of a continuous baby contest in this community, in which we place the premium on the child who shows the greatest improvement over a six months period rather than on the child who scores perfect through no ones special effort. Every six months we hold an examination taking in babies from three weeks to one year of age. The defects are noted and the babies scored. At the end of six months these children are re-examined (also a new class is taken in) and the ones showing greatest per cent of increase or improvement are awarded the premiums. In other words, we believe the way to make better babies is to encourage the bringing in of the weaker ones for examination and advice.

Why couldn't a few men who are doing pediatrics, be chosen to hold a clinic during State Fair Week, where the poorly nourished, sick and defective children could be brought for examination and treatment?

We believe if a plan carrying a similar idea was worked out and wide publicity given, many hundreds of babies would be brought in for examination, where under the old plan they would not. (In this one community we have about eighty for examination every six months). And we are sure if we could help only a part of them to health we would be doing a greater work than merely praising the perfect child.

E. R. Hays Falls City, Neb.

### War Plan Association American Medical Colleges.

You will be interested to know that the Advisory Committee appointed at the general meeting on

Tuesday, June 11, met the same evening and formulated several recommendations for presentation to the Surgeon General of the Army and Navy, and, in conformity with the plan suggested by the Surgeon General, the committee met Wednesday morning with the Committee on Medical Education of the Surgeon General's office, composed of General Russell, Colonel Arnold, Lieut. Colonel Vaughn and Welch. With a few modifications, our recommendations were accepted and will no doubt be approved by the war department.

The recommendation on speeding up propaganda was in accordance with the vote taken at the general meeting on Tuesday. The colleges in general are warranted in giving a continuous session from this time on to the senior class, graduating if the course is completed in January, 1919. The continuous session is recommended in such schools as can give it without lowering standards. The recommendation in fact is just the same as the resolution passed by the Association in February. The recommendation as adopted is as follows:

"It is recommended that only such medical schools as are amply equipped with teachers, laboratory facilities and clinical materials be permitted to enter at this time on a plan of continuous sessions."

Another recommendation is:

"That the Surgeon General consider as well recognized medical schools only those which enforce as a minimum requirement for admission two years of college work including courses in physics, chemistry and biology."

Another recommendation:

"We urgently request the Surgeon General to commission with adequate rank in the Medical Reserve Corps, or the Students' Army Training Corps, eligible members of the faculties of well recognized medical schools; this with the understanding that a sufficient number of these officers will be assigned to duty in medical schools with periods of service long enough to provide for the efficient teaching of the medical students. Where possible it is desired that such officers alternate in active duty between service with the troops and teaching in medical schools."

Another recommendation:

"That when and where feasible the Surgeon General shall arrange for active military service for medical students during the summer vacations, with the object of shortening the time for completing their training as medical officers."

These are the principal recommendations of the joint committees' report. There are several others but they are devoted more to detail than material facts. The full report will no doubt be published just as soon as it is approved by higher authority.

Very truly yours,
W. J. Means.
President Association of American Medical Colleges.

---

### Experience Overseas.

I will endeavor to give you a few ideas as to how the British handle their sick and wounded cases in France, describing the Military Vicious Circle. With every battalion there is a medical officer called the Regimental M. O. A man is wounded while in the front line trench or perhaps out in No-Man's-Land. If in No-Man's-Land and a heavy strafe is on, he is of necessity left there until fire lessens or stops altogether. Then a couple of stretcher bearers will dash out for him. In going out they may be killed or wounded themselves. Most of the time, however, they wait until cover of darkness and then go out to pick up the wounded and bring them in. It is in this work that the medical officers and staff get their opportunity to win medals—and while speaking of medals I may add that the highest number of Victoria Crosses (the highest British decoration) have been won by the Royal Army Medical Corps. The Regimental M. O. attends to the first aid dressing, stops bleeding, etc The soldier is then taken to an Advance Dressing Station (A. D. S.) where his wounds are again dressed and the primary steps taken against infection.

From the Dressing Station he is taken to a Divisional Collecting Post, where he receives seven hundred units of antitetanic serum(A. T. S.), and any further attention necessary. This is the part of the work I am running at present, but I have an A. D. S. and D. C. P. all in one. The soldier is sent from the D. C. P. down to the Field Ambulance (F. A.), and transported immediately to a Casualty Clearing Station (C. C. S.) Here the operations are performed if any are necessary. The C. C. S's are nearly all under canvas. They have the Surgeons' Internists, X-ray men, laboratory men, eye, ear, nose and throat men, dermatologists, and all the other specialists here. The wounded man receives all the aid modern science can apply at these canvas hospitals. The nursing staff is composed of one matron, sisters, (they call a qualified nurse a sister in the army), and nurses. The nurses are just girls who have volunteered to do the rough part of the work. Then of course there are ward orderlies who are R. A. M. C. men. The patient is sent from the C. C. S. as soon as practicable to a general hospital. These are nearly all down at the Base. Two of our greatest surgeons are the heads of two of England's big general hospitals—Number 13, General Major Harvey Cushing, and George Crile. We have much to be proud of in these men. I receive many requests from the Tommies to be sent to the "'orspital where them good Yankee Docs are." From the general hospital the patient is sent across the channel to England, (blighty as the men call it), and at last arrives at a base hospital. The hospital where I was located at Birmingham was one of the largest in England—about six thousand beds. Here the soldier is treated by the M. O. in charge of the ward until he is fit to be "marked out." That means until he is strong enough to be sent to a Voluntary Aid Hospital (V. A. D.). A surgical case goes to V. A. D. as soon as he requires nothing more than dressings. From the V. A. D. he is either sent back to the hospital for further treatment or marked for a Medical Board, which decides whether he is fit for the army and what category he goes in; or he is marked to a Command Depot. The Medical Board consists of two M. O.'s and they examine the man to determine whether he is to be sent back to France. If so, he is A1. If he is fit for service at the base in France, but not in the fighting line, he is B1. If only fit for duty at home in England he is B2. If only for light duty at home he is B3. If he is marked to the Command Depot he immediately gets a ten-day leave. Of course they like that. When he arrives at the Command Depot, he is paraded before the M. O., who decides which section he is fit for there. They have three sections: Marching loose formation; do not keep step; Division 1—one hour exercise daily; Division 2—one mile walk without pack; Division 3—two mile walk without pack; divisions two and three, three times a week. Section II—Division one, seven mile walk without pack; division two, seven mile walk without pack; football, bayonet drills, bombing; three times a week. Section I: division one, seven mile walk with pack every day; division two, seven mile walk with pack every day; division three, seven mile walk with pack every day, full marching order and keep step, 115 per minute.

These men play games, have gymnasium work, bayonet drill, bombing, light rifle practice on miniature range, etc. The Command Depot where I was stationed in England had five thousand men and about two hundred officers all of whom were temporarily unfit (T. U's). When a man got worked up to Section one, division three, he was left there about a week and then given his pack and ordered to rejoin his original unit. He then received more training and returned to France and thus completed the Military Vicious Circle.

I am now in the Third Highland Ambulance and am very proud of the fact that I am in the famous Fighting 51st Division. It is a Scottish division and of course all wear kilts. The men in the division are great soldiers. The Germans call them the "Ladies from Hell." I hope to be called back to my own army some of these days, but will carry on with the British until I am.

The British like the Yankee M. O.'s and we get along fine with them. My one ambition, besides getting back to Omaha, is to be in the American army—that starts the ball rolling over here which will not stop until we reach ultra-Satan's capital, Berlin.

Lieut. J. A. Tamisiea, M. D., 1918.
M. O. R. C., U. S. A., Highland Field
Ambulance, B. E. F.

## The Plan Adopted by the State War Committee For a Survey of the Nebraska Physicians.

We, the undersigned physicians, of the Councilor District, of Nebraska, feeling that each one has or should have a part in the winning of the present war, and in order that the burden as well as the honor may be equally shared, agree each with the other, that they will accept same if granted.

Those of us who fail to receive commissions on the account of physical disability, and those of us over fifty-five years of age, agree to make application for and accept service in the Volunteer Medical Service Corps.

This action is taken and will be considered obligatory only in the event that a majority of the counties of the Councilor District of the Nebraska State Medical Association adopt this method, and that the number of physicians necessary for each individual county's quota be selected as called into service, by a committee composed of the councilor of his district and one physician from each county, said physician to be chosen by the physicians of said county.

The above resolution by the third district is herewith submitted with the endorsement of the War Committee of our N. S. M. A.

Col. J. M. Banister, Chairman, J. E. Summers, Ewing Brown, Chas. L. Mullins, J. M. Aikin.

This scheme originated by Dr. R. W. Fouts, councilor in the third district was introduced and adopted in the Johnson County Medical Society, then with the hearty and unanimous approval of our State War Committee was recommended through the Councilor District War Committee was recommended through the Councilor District War Committee to their respective county societies. It is democratic, practical and just.

Col. J. M. Banister, Ch'm, Joseph M. Aikin, Sec.

## GENERAL NOTES.

Porto Rico shipped to the United States in 1916 forty-six million dollars worth of sugar.

America's foremost educators of the blind are combining forces in their effort to train sightless soldiers for useful future work.

The United States devotes more than thirty million acres to oat-raising, yet in Japan oats are considered fit only for horses and cattle.

It has been found possible to use much of the wheat-milling machinery of the United States for milling corn. In this way the output of corn meal was almost doubled within five months. Instead of using eight million barrels of wheat flour each month, America can now depend upon corn products for all breadstuff demands.

## STATE NOTES.

Captain LeRoy Crummer, who was stationed for several months at Camp Oglethorpe and Camp Greenleaf, has been transferred to the surgeon general's office at Washington, D. C., and is in charge of work in the department of reconstruction under Colonel Billings.

Dr. H. C. Sumney has been appointed a captain in the medical corps, and leaves Sunday for Camp Oglethorpe, Ga., to remain in training until he goes overseas.

## DEATHS.

Georgia Anna Arbuckle Fix, Gering, Neb.; University of Nebraska, Homeopathic Department, Lincoln, 1885; aged 55; died in San Diego, Calif., July 26.

## MARRIAGES.

Lieut. John Jacob Fossler, M. R. C., U. S. Army, Millard, Neb., on duty at Fort Riley, Kan., to Mrs. Eva Brewington of Omaha, at Lincoln, Neb., July 20.

## Supplementary List July 1 to 31, incl.

Recommended for Commissions:

| | |
|---|---|
| Eugene Edwin Rider, Bertrand | Capt. |
| Dietrich L. Bartling, Bloomfield | 1st Lieut. |

| | |
|---|---|
| Will F. Dugan, Campbell | 1st Lieut. |
| Christian Alexander Allenburger, Columbus | Capt. |
| Harry Edwin Burdick, David City | Capt. |
| Russell Rufus Craft, Exeter | 1st Lieut. |
| Jean Phillip Fesse, Franklin | Capt. |
| Hal Clarke Smith, Franklin | Capt. |
| Daniel Guedalyah Golding, Fremont | Capt. |
| Grant Simpson Reeder, Fremont | 1st Lieut. |
| Richard Thompson Van Metre, 504 1st National Bk. Bldg., Fremont | Capt. |
| Lloyd L. Cramer, Harrison | 1st Lieut. |
| Otis Russell Platt, Hebron | 1st Lieut. |
| Frank Newcomer Townley, Kenesaw | 1st Lieut. |
| Joseph Josiah Hompes, 612 Security Mutual Life, Lincoln | Capt. |
| Louis S. B. Robinson, 621 South Eleventh street, Lincoln | Capt. |
| William Sylvester Bartholomew, Marion | 1st Lieut. |
| George Harrison Gilmore, Murray | Capt. |
| Earl Cuddington Sage, 2310 South Thirty-second St., Omaha | 1st Lieut. |
| William Ernest Packwood, Riverton | 1st Lieut. |
| Harry Harold Thompson, Talmage | 1st Lieut. |
| William Patrick Hynes, Valentine | 1st Lieut. |
| Harvey Lee Starkey, Wood River | Capt. |
| James Norris Plumb, York | Capt. |

---

### Female Weakness Cures.

(A Pamphlet by Propaganda Department, A. M. A.)

This pamphlet is timely and good. The female reproductive organs have been a prolific source of revenue for quack and unscrupulous practitioners altogether too long.

Poor womankind has been made to believe that all her discomforts are due to some unseen condition in the pelvis and has submitted to all kinds of abuses hoping to find relief.

Most of the mare "nothing bettered but rather grow worse" locally and in addition get a drug habit grafted on to their other infirmities.

Let the educational work go on.

A. B. S.

---

Say! Doctor! You should have Doctor Elliot P. Josyln's little work on the up to date methods of handling diabetic patients, called "The Diabetic Manual," published by Lea and Febiger of Philadelphia.

It will give you all the data for diagnosis and handling of diabetic patients in so concise a form that it will be a pleasure to study it and apply its principle of these important cases. It gives in a concise manner the details of the Allen fasting and feeding treatment which is the key note to successful management of diabetes.

There are dietetic tables which make it very easy to apply the dietetic principle and many formulae for palatable food appropriate. The diet tables showing the calory value and percentages of the proteids, fats and carbohydrates are very nicely arranged and instructive.

We are satisfied that diabetes is rapidly increasing, certainly in this section of the country, and every physician should be up to date in this modern conception of its management along the lines instituted by Allen of the Rockafeller Institute and so successfully carried out in practice by the author of this book, Elliot P. Josyln of Harvard University.

The price is in reach of all, $1.75.

W. O. W.

---

## Recent Development in Intestinal Bacterology

By A. J. Kendall.

(Journal of American Medical Sciences, Aug., 1918)

The aggregation of micro-organisms that inhabit the gastro-intestinal tract, stands in a definite relation to the diet of the host.

At birth the gastro-intestinal tract is sterile. Several hours post partum, the intestines become the seat of micro-organisms.

The variety of micro-organisms differs with the age of the host. During the nursing period, because of the milk diet, which contains a predominance of carbohydrates, the prominent micro-organism is the bacillus bifidus. The nursling's feces are acid in reaction, because of the lactic acid produced by the bacillus bifidus.

As the child grows older and the diet more complex, which usually means a coincident diminution of proportion of carbohydrate to protein, the intestinal flora changes. The obligatory fermentative bacteria are gradually replaced by the coliform bacilli that thrive equally in a medium relatively rich in carbohydrates or in one in which carbohydrate is practically absent. In adolescence when the dietary habits are fixed the intestinal flora reaches an equilibrium; the coliform micro-organisms constituting more than fifty per cent of all viable intestinal microbes. In order that bacteria should grow it is necessary to have appropriate combination of carbon, hydrogen and oxygen. The energy requirements, however, are essentially transformations of combinations of carbon with oxygen, hydrogen; nitrogen being a neglible factor in this stage of bacterial activity. When utilizable carbohydrates are present in media the bacterial products are chiefly those derived from fermentation of such substances. When utalizable carbohydrates are not available the bacteria obtain not only their structural requirements but the energy requirements as well from the nitrogenous substances of the media, and the nitrogenous waste products become prominent. This sparing action of utilizable carbohydrates for protein is of great significance; thus typhoid, paratyphoid and other pathogenic bacteria form highly toxic products in protein media. If utilizable carbohydrates are added to the same media innocuous fermentation products result. From these observations certain therapeutic applications suggest themselves.

It would be logical in intestinal infections as for example in dysentery or cholera to attempt at least to flood the intestinal tract with considerable amount of suitable carbohydrate and thereby provide the necessary non-nitrogenous medium for these organisms. The reduction of toxemia of typhoid which is frequently observed in patients who are upon a carbohydrate rich diet (Coleman) is probably explained by the above observation. In addition to carbohydrate diet the introduction of bacillus acidophilus would prove beneficial in the treatment of intestinal infections, since the products that are formed are benign to the host but inimical to the bad microbes. M. G. W.

---

### Medical Society of Missouri Valley.

Thirty-first annual meeting, Omaha, Neb., Thursday and Friday, September 19-20, 1918,. Meeting Place and Headquarters: Fontenelle Hotel.

Officers:—A. I. McKinnon, president, Lincoln, Neb.; T. M. Paul, 1st vice-president St. Joseph, Mo.; Paul Gardner, 2nd vice-president, New Hampton, Iowa; O. C. Gebhart, treasurer , St. Joseph, Mo.; Chas. Wood Fassett, Secretary, Kansas City, Mo.

General Arrangements Committee—J. E. Summers, chairman; B. W. Christie, L. B. Bushman, I. S. Cutter.

Reception Committee—A. F. Jonas, R. W. Bliss Roy A. Dodge.

Ladies' Committee—Mesdames J. E. Summers, B. W. Christie, A. F. Jonas, G. A. Young, Palmer Findley, A. F. Tyler.

---

## Orders to Nebraska Officers of the Medical Corps, U. S. Army During August.

### August 3.

To Camp Beauregard, Alexandria, La., base hospital, Capt. Washington I. Devers, Upland. For duty, from Fort Riley, Lieut. Henry B. Boyden, Grand Rapids.

To Camp Cody, Deming, N. M., base hospital Lieut. Leo J. Killian, Blair. To examine the command for nervous and mental diseases from Camp Bowie, Capt. Harry R. Carson, Norfolk.

To Camp Grant, Rockford, Ill., base hospital, for observation and treatment, Lieut. J. Irwin Limburg, Walthill.

To Camp Las Casas, San Juan, P. R. base hospital, from Camp Greene, Capt. Judd A. Strong, Kearney.

To Fort Oglethorpe for duty, from Fort Riley, Majors Elmer S. Tenney, Lincoln; Harold E. Eggers, Omaha. For instruction, Capts. Royal Woods, Haigler; Roy P. Stoops, Scottsbluff; Lieuts. Frank W. Plehn, Scottsbluff; Polk Richards. Winnebago; from Fort Sill, Capt. Elmer R. Porter, Omaha.

To Fort Riley for instruction, Capts. Claude B. Calbreath, Hastings; Erskine M. Barnes, Omaha; Frederick H. Kuegle, West Point; Lieuts. Frederick G. Kolough, Schuyler.

The following orders have been revoked: To Camp Custer, Battle Creek, Mich., for duty, Capt. George H. Brash, Beatrice. To report by wire to the commanding general, Central Department, for duty, Lieut. Joseph H. Boyes, Hebron.

### August 10.

To Camp Crane, Allentown, Pa., base hospital from Camp Pike, Capt.Wilbur K. Riley, Wisner.

To Camp Lee, Petersburg, Va., for duty, Capt. Seth E. Ragan, Seward.

To Camp Sevier, Greenville, S. C. base hospital, from Walter Reed, General Hospital, Capt. James S. Taylor, Steele City.

To Oglethorpe for instruction, Majors Samuel R. Hopkins, Hastings; Alva S. Pinto, Omaha; Capt. Grove H. Rathbun, Fremont; Lieut. Ernest G. Kieck, Springfield.

To Fort Riley for instruction, Capt. Harvey L. Starkey, Wood River; Lieuts. Lee A. N. Delanney, Belgrade; Thomas J. Vanderhoef, Rising City.

To Mineola, L. I., N. Y., for duty, from Lonoke, Ark., Capt. Claude T. Uren, Omaha.

To New Haven, Conn., for duty, Capt. Louis S. B. Robinson, Lincoln.

To Syracuse, N. Y., for duty, from Camp Dodge, Capt. Joseph A. Henske, Omaha.

To Camp Custer, Battle Creek, Mich., for duty, from Chicago, Capt. F. L. Frink, Newman Grove.

To Camp Gordon, Atlanta, Ga., base hospital, Capt. E. O. Weber, Wahoo.

To Camp Grant, Rockford, Ill., for duty, from Fort Riley, Capt. F. D. Burgess, Cedar Rapids.

To Camp Lee, Petersburg, Va., base hospital, from Camp Dodge, Lieut T. E. Atkinson, Mullen.

To Camp Meade, Admiral, Md., base hospital, Capt. A. E. Buchanan, Fremont.

To Camp Pike, Little Rock, Ark., for duty,, from Camp Travis, Lieut. R. E. Roche, Sidney.

To Camp Sheridan, Montgomery, Ala., with the board examining the troops for tuberculosis, from Fort Riley, Lieut. E. O. Wilson, Madison.

To Camp Sevier, Greenville S. C., base hospital, from New York, Lieut. E. W. Fetter, North Platte.

To Cape May, N. J., for duty, from New York, Major E. C. Henry, Omaha.

To Fort Keogh, Mont., for duty, from Portland, Ore., Lieut. W. E. Doane, North Bend.

To Oglethorpe, as instructor, from Fort Riley, Lieut. F. A. Wilmot, Bertram. For instruction, Capts. I. W. Haughey, Aurora; L. C. Bleick, W. P. Haney, Omaha; Lieuts. A. J. Boren, Hastings; E. C. Sage, Omaha.

To Fort Riley, for duty, from Camp Dodge, Major W. J. Redfield, Grand Island. For instruction, Capt. E. E. Rider, Bertrand; Lieuts. F. N. Townsley, Kenesaw; J. J. Fossler, Millard; W. P. Hynes, Potter.

To Hoboken, N. J., base hospital, Capt. G. W. Walker, Lincoln.

To New Haven, Conn., for duty, Lieut. G. S. Reeder, Fremont. Yale Army Laboratory school, for duty, Lieut. W. A. Danielson, Osceola.

To Picron, Ark., for duty, from Southern Department, Capt. J. M. Woodard, Lincoln.

To report to the commanding general, Central Department, for assignment to duty, Lieut. A. H. Issakian, Niobrara.

To Rochester, Minn., Mayo Clinic, for instruction, and on completion to his proper station, from Camp Pike, Capt. H. A. Johnson, Tekamah.

To San Francisco, Calif., for instruction, and on completion to his proper station, from Camp Cody, Lieut. H. J. Jenkins, Omaha.

The following order has been revoked: To Douglas, Ariz., for duty, from Fort Riley, Lieut. T. Lahners, Belvidere.

To Camp Custer, Battle Creek, Mich., base hospital, Capt. H. E. Burdick, David City.

To Fort Oglethorpe for instruction, Lieut. C. S. Lentz, Omaha.

To Fort Riley, base hospital, Capt. J. J. Hompes, Lincoln. For instructions, Capts. J. P. Feese, H. C. Smith, Franklin; R. T. Van Metre, Fremont; Lieuts. R. R. Craft, Exeter; A. A. Ashby, Fairmont; D. L. Bartling, Herman.

To Fort Sam Houston, Texas, for duty, from Fort Riley, Capts. J. G. W. Westerhoff, Carleton; C. B. Calbreath, Hastings.

To Fort Sill, Okla., base hospital, from Camp MacArthur, Lieut. C. D. Spivey, Lincoln. For duty, from Camp Kelly, Capt. C. Minnick, Curtis.

To Lake Charles, La., for duty, from Camp Kelly, Lieut. Frank H. Morrow, Columbus.

To Watervliet, N. Y., for duty, from Camp Sherman, Capt. J. Buis, Pender.

### Nebraska.

To Boston, Mass., Harvard Graduate School of Medicine, for instruction, and on completion to his proper station, from Camp Dodge, Capt. H. R. Miner, Falls City.

To Camp Beauregard, La., base hospital, from Fort Oglethorpe, Capt. I. L. Bogen, Lincoln.

To Camp Crane, Pa., from Camp Lee, Lieut. T. E. Atkinson, Mullen.

To Camp Dodge, Iowa, Capt. G. H. Gilmore, Murray.

To Camp Logan, Texas, base hospital, Capt. C. A. Allenburger, Columbus.

To Camp Zachary Taylor, Ky., base hospital, Lieut. S. G. Zemer, Lincoln.

To Fort Oglethorpe, for instruction, Lieut. R. L. Smith, Lincoln.

To Fort Riley, Lieut. L. L. Cramer, Harrison. For instruction, Capt. O. H. Margaret, Papillion; Lieuts. H. G. Thompson, David City; W. T. Wildhaber, Plymouth.

To New Haven, Conn., Yale Army Laboratory School, from Fort Riley, Lieut. W. C. Becker, Papillion.

To San Francisco, Calif., for instruction, and on completion to Letterman General Hospital, from Arcadia, Capt. F. E. Braucht, Coleridge.

Resignation of Lieut. H. B. Frosh, Lincoln, accepted.

The following order has been revoked: To Camp Grant, Ill., from Fort Riley, Capt. F. D. Burgess, Cedar Rapids.

---

### Received During August.

Books—Principles and practice of Infant Feeding by Julius H. Hess, F. A. Davis Co., Publishers; Biennial report of the Louisiania State Board of health.

Reprints—Interpretation of Negative Laboratory findings in Syphilis by Albert E. Sterne.

Pamphlets—Female Weakness "Cures" from Propaganda Department of the Journal of the A. M. A.; Testimonials, Medical and Quasi Medical from propagandaDepartment of the Journal of the A. M. A.; "Epilesy Cures" from the Propaganda Department of the Journal of A. M. A.; Farmers' Bulletin No. 573, "The Angora Goat;" Farmers' Bulletin No. 920, "Milk Goat."

Journals—Ohio State Medical Journal, The Rhode Island Medical Journal, West Virginia Medical Journal, California State Medical Journal, The Journal of the Oklahoma State Medical Association, The Journal of the Medical Society of New Jersey, Missouri State Medical Journal, New York State Journal of Medicine, Colorado Medicine, Wisconsin Medical Journal, Journal of the Kansas Medical Society, Kentucky Medical Journal, The Journal of the Iowa State Medical Society.

## FIRST DISTRICT.

### Douglas and Sarpy Counties Committee.

A. P. Overgaard, Chairman; A. F. Tyler, J. H. Vance, Wm. P. Wherry, S. L. Bushman, F. H. Kuegle, B. M. Christie, Rop A. Dodge.

### Signers.

G. A. Young, E. F. Shanahan, F. J. Schleier, Max Emmert, John Baptist, D. A. Medders, E. T. Manning, J. H. Vance, L. E. Britt, J. M. F. Heumann, A. W. Fitzsimons, H. W. Parchen, J. M. Aikin, H. M. McClanahan, A. P. Overgaard, A. F. Tyler, A. D. Cloyd, L. E. Edwards, C. G. Moore, Chas. McMartin, Palmer Findley, J. S. Goetz, C. W. M. Poynter, Roy A. Dodge, W. P. Wherry, N. H. Rasmussen, J. K. Newman, C. H. Ballard, R. W. Bliss, L. B. Van Camp, D. A. Foote, L A Merriam, H. T. Allingham, F. L. Lake, Wm. Berry, A. Schalek, M. Langfeld, F. Bacon, J. C. Iwersen, C. R. Atzen, J. T. Mathews, J. C. Woodward, E .Holovtchiner, A. A. Edgington, P. H. Ellis, W. J. McCrann, Sr., Martha E. Clark, O. S. Hoffman R. E. Schindel, R. J. Stearns, C. H. Waters, G. F. Simanek, H. R. Chaloupka,, H. A. Wigton, W. H. Taylor, A. B. Somers, J. F. Hyde, Clarence Rubendall, D. T. Quigley, B. A. McDermott, J. S. Foote, A. Parsons, W. S. Gibbs, F. A. Sedlacek, A. S. Mattson, H. D. Lurvey, C. M. Hauslein, J. R. Sanders, W. M. Davis, Ira W. Porter, H. C. Miller, H. P. Hamilton, A. Johnson, J. C. Bishop, C. P. Brown, T. H. Ensor, J. B. Hill, W. W. Bowser, E. S. Alexander, F. H. Wray, J. S. Van Keuren, Clara B. Cross, A. S. Rubnitz, J. C. Davis.

## SECOND DISTRICT.

### Committee.

H. J. Lehnhoff, Chairman; M. U. Thomas, Cass; A. P. Ginn, Otoe. ————, Lancaster.

### Cass County Signers.

Theodore P. Livingston, Edw. H. Worthman, M. U. Thomas, J. M. Neely, Leonard, Muir, W. A. Alton, J. J. Brendel, W. W. Claybaugh, G. H. Gilmore, J. C. Fate, N. D. Talcott, G. G. Douglas, F. W. Kruse, F. P. Reed, A. R. Hornbeck, P. J. Flynn, B. F. Brendel, T. E. K. Dihel, C. H. Longacre, J. B. Martin, W. M. Barrett, J. W. Brendel.

### Otoe County Signers.

John Thomas, E. C. Williams, W. S. Yager, M. E. Hillis, S. S. Wilson, W. D. Gibbon, M. M. MacVean, G. W. Fegers, Arthur P. Ginn, C. T. Gritzka, Chas. Mayer.

## THIRD DISTRICT.

### Committee.

R. W. Fouts, Chairman; G. J. Rubleman, Johnson; E. M. Tyler, Nemaha; W. T. Johnson, Pawnee; J. A. Waggenner, Richardson; ——————, Gage.

### Johnson County Signers.

V. C. Douglas, A. B. Cramb, G. H. Davies, C. D. Barnes, G. J. Rubleman D. F. Gay, T. E. Fairall, C. Snell, C. C. Conlee, F. Blumer, C. H. Zeigler, S. Howard, W. L. Heilman, J. W. Turner F. S. Morrill.

### Nemaha County Signers.

I. W. Irvin, B. A. Smith, C. A. Lutgen, B. F. Lorrance, E. M. Tyler, V. M. Boal, S. A. Van Osdel, James S. Wilson, P. D. Kelley, C. A. Medlar, W. T. Neal, V. A. Vance, E. C. Reed, S. J. Crudup.

### Pawnee County Signers.

Geo. W. Collins, W. T. Johnson, W. R. Boyer, E. L. McCrae, J. F. Prendergast, Henry M. Harvey, W. R. Waggener.

### Richardson County Signers.

J. A. Wagenner, G. G. Gandy, L. T. Peterson, C. R. Novak, R. W. Fouts, A. W. Montgomery, G. Andrews, W. E. Shook, G. Blomenkamp, C. T. Burchard, H. D. Burchard, C. L. Hustead.

## FOURTH DISTRICT.

### Committee.

A. E. Cook, Chairman; M. H. Evans, Dixon; C. L. Maxwell, Dakota-Cedar-Wayne-Thurston; H. S. Summers, Cuming; F. A. Long, Madison; O. E. Underberg, Stanton; W. T. Craft, Pierce; G. E. Peters, Knox; R. C. Hawkers, Boyd.

### Cedar County Signers.

Francis P. Dorsey, J. B. Walton, John Wm. King, John M. Johnson, Paul John Hermsin, Frank A. Paden, Fred Girald Dewey, Arthur E. Cook, W. Y. Jones.

### Dakota County Signers.

S. T. Davis, C. L. Maxwell.

### Boyd County Signers.

Edward R. Seasongood, Charles F. Zimmerman, Hardy A. Skelton, E. B. Bradley, Henry F. Hewett, Etta E. Hewett, Margaret C. H. Barney, Wm. F. Lewis.

### Cuming County Signers.

Henry Summers, Thomas D. Thompson, William L. Crosby, Edgar S. Thompson, Marie H. Morse, Russell H. Morse, K. E. Thompson, Lincoln Riley, G. L .Thompson, John J. Kiefer.

### Wayne County Signers.

John G. Neely, Edward S. Blair, Charles T. Ingham, B. M. McIntyre, Edna Herren Morris, A. S. Lutgen, A. Texley.

### Knox County Signers.

Sara Blaine Kalar, E. V. Nieuman, Albert O. Carmack, Glen E. Peters, Charles Henry Swift, R. Haddock Burrell.

### Dixon County Signers.

Robert Ellis Bray, Roy Charlton Richards, John Bennett Hoskins Nelson Lewis Hansen, E. J. Fleetwood, Charles B. Coe, Clark L. Phillips, M. H. Evans, W. R. Talboy, J. M. O'Connell.

### Madison-Stanton Counties Signers.

George E. Charlton, C. A. Meyer, Frank Jensen, Lloyd L. Nelson, Charles C. Barr, Edward Tanner, Robert Foster, John D. Ried, L. W. Westhoff, Oscar C. Hopper, A. N. Hawley, Francis A. Long, Homer L. Kindred, A. B. Tashjean, Edward L. Brush, A. L. Macomber, R. H. Foster, O. S. O'Neill, Dr. Finkle, Dr. Mathi, Dr. Richardson.

### Thurston County Signers.

Frederic W. Luhman, Robert S. Seasongood, R. C. Gramlich, Homer R. Johnson.

### Pierce County Signers.

John Mayer, Leslie A. Johnson, Jens P. Jensen, Julium Lingenfelder, Frank George Salter, Henry Melerion, William T. Craft, Frank H. Nye, Guy B. Desparios.

## FIFTH DISTRICT.

### Committee.

R. C. Byers, Chairman; W. J. Davies, Dodge; F. W. Johnson, Nance; M. L. Hildreth, Burt; E. R. Stewart, Washington; A. K. Knight, Colfax; A. G. Luechen, Platte; J. W. B. Smith, Boone; .................. Merrick.

## SEVENTH DISTRICT.

### Committee.

H. E, Potter, Chairman; Porter F. Dodson, Saline; J. W. Archerd, Clay; V. V. Smrha, Fillmore; J. Bixby, Alternate; J. W. Mitchell, Nuckolls; A. J. Coats, Jefferson—G. A. Heath, Alternate; W. H. Squires, Thayer.

### Jefferson County Signers.

U. S. Ammerman, Wm. H. Caulk, J. M. Powell, S. W. Dodge, W. L. Curtis, R. W. Murray, H. L. Clarke, T. J. Andrews, A. J. Coats, H. E. Potter, G. H. Newton, H. Baugess, Geo. H. Heath, O. C. Diehl, G. W. Meisenbach, H. H. Humphrey, Warren Perry, G. DuVall.

### Nuckolls County Signers.

Luke Fox, A. N. Lemoine, Wm. A. Cate, J. R. Buffington, V. A. Thomas, J. E. Brainard, E. K. Hirsch, J. A. Trowbridge, W. F. Mitchell, E. T. Molzahn, J. S. Butler, J. W. Mitchell E. Kauffmann, W. M. Anderson, J. B. Dierecker, W. H. Nelson, F. N. Saville,, E. Phieffer, J. R. Venning, W. J. Pinkerton.

### Clay County Signers.

J. W. Archerd, J. O. Latta, J. E. Spatz, J. R. Bell. J. W. Thompson, H. H. Schultz, H. H. Seely T. D. Howard, A. J. Jennison, F. A. Butler, J. E. Ingram, H. W. Adams, R. D. Martin, W. M. Thomas, J. S. Winston, O. C. Asa.

### Saline County Signers.

W. A. Tyler, F. J. Stejskal, Wm. H. Pallett, M. R. Byrnes, W. M. Elliott, A. A. Conrad, H. W. Quirk, Porter F. Dodson, Joseph Cerny, Frank T. Hamilton, Fletcher J. Farwell, Scott W. Warder, Joseph Simacek, W. J. Kavan, Henry Hein, C. Brenn, Guy B. Cross, C. W. Keith, Jesse Hartman, T. J. Chidester, John E. Moore, Herman A. Gerbig.

### Fillmore County Signers.

V. V. Smhra, W. S. Wiggins, F. L. Beck, N. H. Blakely, A. B. Stratton, C. G. Delfs, S. G. Panter, Jr., J. Bixby F. P. Brockett, S. G. Howard, Russell R. Craft, E. A. Wilson, C. S. Hubbard, R. B. Stratton.

### Thayer County Signers.

A. Herney, Otis R. Platt, W. J. Adamson, M. W.

Spohn, G. R. Taylor, G. A. Birdsall, Harry J. Newell, H. H. Stratton, J. G. W. Westerhoff, Earle A. Harvey, F. Weiss, J. H. Boyes, W. H. Squires, S. H. Cowan, Rudolph F. Decker, H. W. Saylor, C. C. Snowden, P. E. Melbourne.

## EIGHTH DISTRICT.

### Signers.

J. P. Gilligan, E. J. Bild, J. W. Gill, E. J. Oxford, C. R. Gannaway, Wm. W. Noyes, E. T. Sturdevant, Lew A. Carter, W. H. Briggs, Charles H. Root, John Q. Elmore, Eimer Blak, B. F. Richards, Frank Borglum.

## NINTH DISTRICT.

### Committee.

G. I. Sellon, Chairman; E. E. Barr, Grant; ——— Hooker, all in service; S. E. Overmass, Thomas; C. T. Owings, Blaine, J. F. McNulty, Loup; Thomas F. Britt, Garfield; E. R. Keen, Wheeler; H. W. Hubbell, Logan; R. C. Talbott, Custer; ———, Valley; ———, Greeley; A. E. Maneck, Sherman; F. S. Nicholson, Howard; J. H. Fochtman, Dawson; J. W. Miller, Buffalo; ———, Hall.

### Grant County Signers.

E. E. Barr,

### Thomas County Signers.

D. M. Sayles, S. E. Overmass.

### Blaine County Signers.

C. T. Owings, R. J. Williams.

### Loup County Signers.

J. J. McNulty.

### Garfield County Signers.

Thos. L. Britt, Eugene D. Thurston, Eldon J. Smith.

### Wheeler County Signers.

Edw. R. Keen.

### Logan County Signers.

H. E. Hubbell, E. F. Carr.

### Custer County Signers.

H. B. Landis, G. I. Sellon, G. E. Pennington, W. T. Hurst, C. L. Mullins, R. C. Talbot, M. P. Rains, J. L. Paine, J. E. Dunn, F. A. Burnham, A. R. Downing, J. H. Morrow, J. F. Davies, A. L. Matthews, Alfred Johnson, A. C. Rumery, P. H. J. Carothers, J. C. Stadden, E. A. Hanna, C. E. Taylor, C. H. Fenstermacher, J. R. Kalar, F. A. McGrew.

### Sherman County Signers.

A. E. Maneck, C. E. Paul, C. A. Rydberg, A. S. Main.

### Howard County Signers.

Edw. Dodd, J. Heart, Adolph Holm, Frank S. Nicholson, P. M. Pedersen, O. Grotham.

### Dawson County Signers.

B. J. Stewart, J. M. Liggett, C. H. Sheets, J. H. Fochtman, J. W. Bozarth, Wm. M. Bancroft, F. J. Rosenberg, J. E. Olsson, J. M. Chesshir, F. E. Manning, E. L. Meredith, E. C. Steirman, W. J. Birkofer, Joel Anderson.

### Buffalo County Signers.

L. M. Stearns, C. K. Gibbons, J. J. Cameron, J. L. Bennett, C. V. Basten, C. H. Fox, L. L. Robinson, O. D. Johnson, Henry Farrel, M. A. Hoover, J. W. Miller, G. O. Dunseth, Geo. Buol, L. E. Dickinson, J. W. Laughlin, R. L. Heart, A. L. Randall, Chas. Lucas.

## TENTH DISTRICT.

### Committee.

S. F. Sanders, Chairman; A. S. Ambrose, Webster; W. H. Powell, Kearney; W. F. Dugan, Franklin; L. W. Rork, Furnas; W. M. Robertson, Chase-Dundy-Hitchcock-Hayes; W. D. Macknechie, Red Willow; W. S. Fast, Adams; Gosper, no name given; Phelps, no name given; Frontier, no name given; J. O. Hoffman, Harlan.

### Chase-Dundy-Hitchcock-Hayes County Signers.

A. B. Fellers, E. F. Fuqua, N. H. Lewis, W. M. Robertson, E. M. Stewart, W. E. Stewart, B. G. Bailey, A. H. Thomas, H. E. Funk, A. H. Miller, Fred Hoffmeister, L. H. Collier, H. H. Grosbach, J. V. Powers.

### Furnas County Signers.

L. W. Rork, E. A. Hudson, J. M. Willis, J. K. Muldoon, W. A. Staley, G. H. Hall, A. L. Kee, P. L. Doher, Dr. Smith, C. C. Green, F. A. Brewster.

### Kearney County Signers.

A. G. Marstellar, H. S. Andrews, Chas. E. Abbott, H. Haferman, J. Larson, W. H. Powell, J. D. England, J. J. Smith.

### Adams County Signers.

W. Ackley, J. V. Beghtol, J. W. Brown, A. J. Boren, W. T. Carson, Floyd Dean, C. L. Egbert, W. S. Fast, O. S. Gray, C. W. Gooden, Clara M. Hayden, Ol H. Hahn, C. E. Kidder, S. J. Jones, W. W. Keith, J. S. Leisure, W. E. Knowers, J. L. Mace, J. B. McPherson, Dr. Pearson, Amy Robinson, Frank Schaufelberger. Fred Schaufelberger. J. W. Straight, C. R. Spicer, J. T. Steele, Dr. Slute, F. N. Townley.

### Webster County Signers.

J. S. Stockman, C. Wegman, J. E. Uridil, C. F. Kehler, Henry Cook, R. P. Hoxey, Robt. Damerill, J. W. Robinson, R. S. Mitchell, I. A. Pace, A. L. Ambrose, C. F. Moranville, E. A. Creighton, H. S. Reed, C. Wegman, W. J. Devers.

### Harlan County Signers.

D. R. Rogers, J. O. Hoffman, Thos. Massey, S. M. Baker, O. J. Vallicott, A. J. Gardner, W. G. Rundle, B. J. Dodge, J. N. Campbell, Robert Kerr.

### Red Willow County Signers.

D. J. Reid, A. L. Kay, Dare Woodruff, Elizabeth Hohl, C. L. Fahnestock, A. B. Hardin, E. M. Easterday, C. M. Duncan, L. B. Swaggart, W. S. Bartholomew, W. B. Macknechie, W. B. Campbell, S. W. Downing, J. W. Hathers, W. A. DeMay.

## TWELFTH DISTRICT.

### Committee.

A. J. Stewart, Chairman; C. A. Boyd, V. Andrews, W. H. Packard.

### Scotts Bluff County Signers.

A. J. Stewart, E. A. Beard, F. B. Young, F. W. Plehn, A. M. Faught, W. H. Rasmussen, I. N. Stoops, E. M. Farquhar, V. Anderson, F. J. Colbert, W. E. Shike, Andrew Crawford, C. A. Boyd, C. P. Fox, H. Z. Dean, C. Palmer, M. D. Pass, Agnes C. Thorpe, L. R. Jones, F. W. Wightman, C. N. Moore, A. J. Faulk, W. P. Hodnett, W. H. Packard, R. P. Stoops, A. A. Cole, A. Townsend.

### Box Butte County Signers.

L. W. Bowman, H. A. Copsey, C. E. Hershman, H. H. Bellwood, E. E. Barr, M. C. Hurd, Oliver McEuen.

THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, LINCOLN, MAY, 1919

Vol. III. Norfolk, Nebraska, October, 1918. No. 10

CONTENTS.

Page
The Differential Diagnosis Between Benign and Malignant Tumors of the Female Breast, John E. Summers, M. O., Omaha 297
Sinusitis and a Conservative Treatment for Selected Cases, S. G. Zemer, S. B., M. D., Lincoln 301
Granuloma Pyogenicum, report of Two Cases, Michael G. Wohl, M. D., Omaha 304
Child Conservation a War Measure 305
Constitution 308
By-Laws 310
Officers of the Nebraska State Medical Association for 1919 319
Editorial 320
General Notes 321
State Notes 322
County Society Notes 322
Orders to M. R. C. Officers from Nebraska for the Month of September 323
Commissions Offered and Ordered to Duty on Acceptance 323
Recommended for Commissions M. O. R. C. 323
Abstracts—
A State Wide Plan for the Prevention of Venereal Disease 324
Treatment of Septic Abortion 325
Abstract from J. A. M. A., Aug. 31, 1918 325
Abstract J. A. M. A., Sept. 7, 1918 326
Books Received During September 326
Book Review 326
Meningitis in the Newborn and in Early Infancy, by Moses Barron, M. D., Minneapolis, Minn. 327

## The Differential Diagnosis Between Benign and Malignant Tumors of the Female Breast.*

John E. Summers, M. D., Omaha.

In the last published collected papers of the Mayo clinic will be found an article by McCarthy and Broders analyzing a series of 1800 mammary pathological conditions with reference to the number and kind of mistakes in diagnosis made by the surgeons of the clinic as evidenced by the pathological examinations in the laboratory, of the specimens removed by operation. This is a most valuable paper as it treats in an authoritative way a subject too little comprehended by the general profession, viz., mistakes in diagnosis in mammary pathological conditions are not at all infrequently made by men of large experience in the examination of these lesions.

The subject of breast pathology is too large for one to attempt writing more than a glossary, even to be bound between the covers of a good sized book, so I will only call your attention to that part of the pathology of the female breast in which we will consider the differential diagnosis between benign and malignant tumors.

In the series of 1800 mammary pathological conditions above referred to, the total number of mammary carcinomas as diagnosed in the surgical laboratory was 933. Of these the clinicians diagnosed forty-one as benign, 4%. The total number of clinical diagnoses of carcinoma in the series was 763. Of these forty-one were incorrect, 5%. There were 376 cases of chronic inflammation of the breast diagnosed in the surgical laboratory. The clinicians had diagnosed twenty-eight of these as malignant, 7%. Fifty-one cases diagnosed as chronic mastitis were incorrect, 26%. Nine cases were diagnosed as chronic mastitis which were carcinoma, 4%. There were 370 cases of fibro-epithelial neoplasms diagnosed in the surgical laboratory. Of these eight were diagnosed by the clinicians as malignant, 2%. Two hundred diagnosed clinically as fibro-epithelial neoplasms. Fifteen, or 7%, of these were found to be malignant. There were 121 cysts diagnosed in the surgical laboratory; eight, or 6% of these were clinically diagnosed as malignant. Thirty-seven were diagnosed as cysts. Of these six, or 16%, were malignant.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

The clinical diagnosis of adeoma was made in eighty-eight cases. Of these ten, or 11%, were found in the laboratory to be carcinoma. A clinical diagnosis of fibro-adenoma was made in seventy-nine cases. Five, or 6%, of these were proven to be carcinoma. Thirty of these cases of fibro-adenoma were diagnosed as benign. In the laboratory six or 20%, were found to be carcinoma.

It is very plain from these statements that the clinician encounters great difficulty in correctly diagnosing neoplasms of the breast. I do not recall previously having noted so large a series of neoplasms of the breast in which a comparative study of the clinical and laboratory diagnoses has been published from an authoritative source. Two thoughts impress one in reviewing these statistics: One, the more rational, being that without the aid of the well-trained and experienced pathologist to settle the question at the side of the operating table, plus his immediate report on the frozen section, it is practically impossible to make a positive diagnoses as to the nature of a breast lesion. This was demonstrated in the Rochester statistics in that out "of 933 mammary carcinomas, the pathologist discovered, during operation, 211—22%—carcinomas which the clinician surgeon had diagnosed benign conditions, or in which they did not make a positive diagnosis." The authors of this report remark: "The practical surgeon, nowadays, however, is beginning to learn that clinical diagnoses in the breast are frequently not positive. When the surgical pathologist picks up 22% of the total carcinomas by means of his special training and methods, he renders a service of supreme value not only to the surgeon, but to the patient."

The second thought, hardly fair perhaps, but it cannot be kept back, is that so many different men not all of equal training, passed upon the clinical diagnosis of these 1800 cases—that a large percentage of mistakes was shown up by the pathologists.

Either this is so or else men of large experience elsewhere who made personal clinical diagnoses checked up by laboratory findings, are self-deceived or their laboratory reports are unreliable.

In a recent clinical lecture at one of America's foremost clinics a surgeon of national reputation said: "To one who has had a wide experience in diagnosing these cases, i. e., cancer of the breast, the diagnosis seems so perfectly clear in 90% or more of the cases, even where the carcinoma is not larger than a bean, that it is difficult to understand how mistakes are so frequently made today." (Practically all the clinical phenomena of cancer of the breast independent of enlargement of the neighboring lymphatics, can be accounted for I believe, by what this surgeon expresses when he says): "The gross examination of carcinoma of the breast gives one exactly the same impression that one obtains from examining a slide under the microscope, i. e., that the carcinoma inflitrates the tissues, is imbedded in the surrounding tissues, and that it has a tendency to draw towards the center of the lesions the strands of connective tissue that radiate from it, so that if it is close to the skin there is a tendency to dimpling the skin. These characteristics are so definite and so different from benign tumors and inflammatory lesions, that we have no hesitancy in making, in over 90% of the cases, the immediate diagnosis from the clinical findings." This surgeon further says:

"In the small minority of less than 10% where there is a question about the clinical diagnosis, the position should be taken that the case should be immediately investigated, the patient gotten ready for the radical operation, and then before removing the breast, the tumor cut into and the diagnosis made either from the gross section or, if there is the slightest doubt as to its character, from a frozen section made at that time, so that the radical operation can be done under that anesthetic."

To this last recommendation I cannot accede. If there is sufficient doubt as to the character of the tumor to demand the presence of the pathologist to make a frozen section, the tumor should not be cut into, but should be removed with a wide margin, a frozen section made, and the determination as to whether or not a radical procedure be further carried out, depend upon the report of the pathologist. The cutting into a tumor which may be malignant, the determination of which is left to a pathologist who may himself mistake a malignant for a benign growth, is bad surgery. The thoughtful and experienced clinician should be a close student of the clinical history and symptomatology of the pathological changes found in the female breast. Comparative clinical and pathological studies are bringing to light much knowledge which, added to the general understanding, ought to materially decrease the percentage of mistakes made in the differentiation between the types of neoplasms.

Perhaps in no other recent study has more interest been developed than in that of intracanalicular papillomas of the breast. Within the last few years the writer has seen a small number of these cases which have presented puzzling features and it has been hard for him to give a decisive opinion as to the course to be pursued in several individual cases, particularly in those in which no tumor of the smallest size was perceptible and yet there has been a discharge from the nipple, of yellow, sticky fluid, not blood-tinged. In these breasts, which in my observation have been voluminous ones, the pathologists tell us that small papillomas are found in the milk duct, deep within the breast, too deep for a tumor to be palpable.

When the discharge from the nipple is watery and not sticky, and not free from odor, carcinoma is to be suspected. When there is bleeding from the nipple— no tumor being susceptible—the case may be one of cancer, but is probably not so. My own advice would be to consider every case of bleeding nipple with a palpable tumor as probably malignant. Disputed cases and advanced easily recognized cases of most medical and surgical diseases seek the meccas for diagnosis and treatment, but in every-day practice, as I meet it, benign tumors of the female breast are about as frequently met with as malignant tumors. Although I must admit that until within the last few years my impressions were otherwise.

So many different names have been given new growths by pathologists—the nomenclature is so voluminous—that no man not an exclusive pathologist can grasp the meanings of the differences. Many are too fine-spun other than to satisfy the vanity of the pathologist describing them. A simpler nomenclature of the tumors of the female breast is needed for clinical diagnosis. Patients come to us in order to have us tell them the nature of some change in the breast—the predominating fear being cancer. The pathologist's advice is worth little except after his microscopical study, and in a certain percentage of cases the surgeon's is worth no more than the pathologist's until after the pathologist has made his report. I am convinced that 22% is an inexcusable number of mistakes to make in the diagnosis of tumors of the breast.

A more careful study of benign tumors as to their special characteristics, as differentiated from those of a malignant type; an analysis of first the individual, her age, the family history, has there been a distinct well-remembered traumatism of not a severe character—the reverse of this applies to the history of trauma in bone sarcoma; the situation as to the quadrant in which the tumor is located, its isolation or connection with the breast proper determining its movability. Its relation to the skin, to the pectoral fascia; is there an enlargement of the neighboring lymphatics? Is an isolated tumor a cyst—cystadenoma; a fibro-adenoma? Are there multiple cysts, grouped cysts of several years' history—the so-called Schimmelbush tumors? Very rarely any type of benign tumor may be found in the breast—as for instance, a lipoma or a dermoid. Incidentally I may remark that I have recently successfully removed a large lipoma from within the caecum which was the cause of an intussusception. True intra-glandular lipomas of the breast are very rare, about as rare as lipomas of the caecum, of which only six cases have been reported. Is the tumor a sarcoma? Why do we suspect the possibility? Actinomycosis of the breast may possibly be primary but almost never so—only sixteen cases can be found published in the literature. Primary tuberculosis of the breast may almost be denied. And so on, we should study our subject carefully. If we do, we will make fewer mistakes to be corrected by the pathologist. In an analysis of the 1800 tumors of the breast in the Mayo clinic, to which we have referred, it was found that there had been an actual error of from two to twenty-six per cent, an apparent error of from eight to fifty per cent, and an avoidable error of from one to eighty-six per cent. The authors of the paper boldly bid for the services of an expert pathologist to be present and make frozen section examinations at the time of operation for the protection of the patient. They say that they have proven that a 5% error was made in diagnosing carcinoma, and a 22% error in positively discovering carcinoma. If such mistakes are made at a clinic with opportunities for correct diagnosis, what may be said of the mistakes made by doctors in general. Reliable, experienced pathologists are few except as attached to large teaching institutions which alone can afford to pay for the services of such men. The opinion of the pathologist engaged in the practice of medicine is hardly to be relied upon. I would not accept it—in fact, would rather trust my clinical experience and surgical sense. I believe this should be the position taken by surgeons: First and foremost, the interests of the patient; second, doing away with the half-baked, illy-trained, self-styled pathologist. We should encourage by all means in our power men having ability to fit themselves in the scientific lines of pathology and bacteriology, particularly as these specialties may be made to apply to the living, in studying along with the physicians and surgeons the pathological processes as observed in the living.

Little progress has been made in curing the ills of the living by studying postmortem changes in the dead-house. The wonders of modern medicine are developing from the study of the living.

### Discussion.

**Dr. A. I. MacKinnon, Lincoln.**—I wish to commend this paper very highly. But permit me to utter a protest against the indiscriminate cutting of the female breast. Dr. Lane of London, many years ago, advocated removing the muscle sheath, and claimed the lymphatics travel not in the muscles, but in the sheath.

From my own experience I have never seen a recurrence of a cancer of the breast in the breast. Those who die have a metastasis—never in the breast. Half the time I never do a radical cleaning off down to the ribs. I know there are dozens of women with a little malignant tumor of the breast who go to an ultra-radical surgeon, and everything from the ribs out is sacrificed, when cleaning out axillary and supra clavicular glands and possibly muscle sheath will do all that can be done and the woman is not greatly mutilated. I believe Dr. Murphy stated our results were not any better than twenty-five years ago when they made an incision and removed it. I do not believe it is fair to the women, and think it is one reason that keeps them away from us.

**Dr. C. O. Rich, Omaha.**—I feel Dr. Summers should be complimented on this paper as it is an important subject, and one that has been especially interesting to me.

It seems to me the diagnosis of these cases really rests with the family physician, because it is he who in the majority of cases first makes the examination. In these cases that are at all advanced, showing the metastasis of the lymphatics, the mortality is large. It is the diagnosis of these cases in the beginning we are after. Some years ago Dr. Halstead gave statistics of five hundred cases in his clinic in which he says only fifteen were seen during the first month in which the tumor appeared. It does not seem strange to me that a mistaken diagnosis was made even in the Mayo clinic because the diagnosis in these beginning cases of malignancy is not always easy to make. When you have the depressed nipple, anyone can make the diagnosis. But in the early stages where there is demonstable adhesion to the skin, the pathologist will show us some times these cases which we felt were benign, pathologically are shown to be malignant.

It seems to me the men who see these cases first should be impressed with the necessity of thorough examination of the breast and by such systematic examinations this mortality would be greatly lessened.

**Dr. J. S. Welch, Lincoln.**—So much has been said, and all of a good kind, on this subject, that there seems little to add except to push it "over the top." Everybody concedes that Dr. Summers is right in saying this patient should have an operation early, backed up by a good pathological report, or, as Dr. Davis said, "as good as possible for you to have," and then act according to what the pathologist says.

I want to take this stand: 50 per cent of these patients at the age of thirty having a lump in the breast have a carcinoma; 90 per cent will have, if it isn't then. Now if such danger as that really exists, not one of them should be anything but a case in doubt. Hence in my judgment all of them with any lump at all, should be acted upon.

Enough is said, perhaps, about the qualifications of the pathologist. Certainly have him as soon as possible, and have his opinion in the operating room, and not alone afterwards.

There is one other thing I should like to speak of—the importance of carrying this differential diagnosis to the laity. There is little use to quarrel about the necessity of the case if the lump is there. Dr Bloodgood told us in our state meeting last year how impossible it is to tell all cases, even under the .microscope. So the biggest sinner in the crowd is the doctor who says, "We will just watch that a little while," until it has gone on to the bad.

Dr. Bloodgood came to the state to talk to the public about the importance of pushing this differential diagnosis to a safe end. He left the message for us that we should carry it on to them in our individual practices. If there is but 10 per cent in the safety zone, they will not want to take the chance. I urge the importance of this point upon you.

**Dr. C. A. Roeder, Omaha.**—I enjoyed the great privilege of taking a small part in the study of the breast tumors, a compilation of which has just been reported, during my service at the Mayo clinic, particularly with Dr. MacCarty. His classification of epithelial proliferation of the milk ducts is very interesting and gives us a good working basis whether or not it is agreed upon by other pathologists.

Carcinoma of the breast begins in two ways. First as a primary type starting as a minute growth and too small to be felt by the clinician until it becomes quite advanced. This is the most dangerous type and causes the greatest recurrence. When found it always demands a radical operation. The second type begins as a metaplasia of the epithelial areas of benign tumors and seen less frequently, because nowadays the benign tumor is soon discovered and quickly removed. If certain solitary cysts are allowed to remain and all adeno fibromata, a marked percentage will become malignant. Early surgery is indicated here and if a benign tumor shows a few areas resembling malignancy but the capsule of the tumor perfectly normal and no evidence but a small area suspicious, I do not think the radical operation should be performed because the axillary dissection which cannot be done properly by our average surgeon is a serious procedure leaving in too many instances an arm crippled from lymph or venous stasis.

---

## Sinusitis and a Conservative Treatment for Selected Cases.*

S. G. Zemer, S. B., M. D., Lincoln.

The method of treatment to be briefly outlined is not original with me and not exactly new, but recently an increase in interest in the procedure has developed and results have vindicated nearly all that has been claimed for it.

I will not describe the anatomy of the nasal sinuses except in so far as is necessary to a better immediate understanding of the causes of sinus inflammations and infections.

For all practical purposes the sinuses are closed cavities, with small and variously located ostia making them accessory to the respiratory tract. They are lined with a mucous membrane similar to that of the upper respiratory tract, yet the glandular elements and the terminal nerve filaments are not nearly so numerous as in the exposed mucous membrane. The epithelial layer of the membrane is also much thinner and the cells resemble more those of the endothelial type, and the mucous membrane has therefore less resisting power.

Numerous theories have been advanced regarding the precise function of these cavities, and even at the present moment many authorities hold almost directly opposite views as to their significance. In a resume by Skillern, the following have the most semblance of probability:

1. Remains of certain rudimentary structures which in lower animals serve as a important adjuncts to the sense of olfaction.
2. An adjunct to olfactory function by evenly distributing the inspired air in the olfactory region.
3. To lighten the bones of the skull in order that proper balance may be maintained.
4. Adjunct to respiration. Moistening the inspired aid.

Braune and Clasen have shown that a certain amount of air change takes place in the sinuses during respiration.

Measured by a water manometer the intra nasal air pressure, according to Mink, is, during ordinary inspiration from -6 to -8 mm. H20. During ordinary expiration from +4 to +6 mm. H20. On forced inspiration the pressure varies from -50 to -65 mm. and on forced expiration the pressure varies from +30 to +35 mm.

The ventilation of the sinuses is influenced by the inspiratory currents of the nose which being negative in pressure causes siphonage through the orifices. At the end of each inspiration, however, the negative pressure of air in the sinuses is equalized by a sudden inrush of air to atmospheric pressure. At expiration a positive inrush of air to the sinuses takes place. Thus the air change comes about.

Any pathological change in the membrane about the ostia of the sinuses interferes with this exchange hence a dead space easily results in slight nasal inflammations which still lowers the resistance of the sinus mucous membranes and is conductive to an extension by continuity of the nasal inflammation to the sinuses.

As normal drainage of the sinuses depends on the action of the ciliated epithelialium, and the position of the ostia in relation to different positions of the head, the maintainance of patency of the ostia is essential to any treatment of inflammations of the sinuses or the nose.

This being secured, an accentuation of the physiological functioning of the drainage would seem to be a logical method of local therapeusis in most acute cases of sinusitis and in some chronic conditions.

Further, as the nutrition of the sinus mucosa depends almost entirely upon the blood vessels entering through the ostia, the importance of the maintainance of a right of way through these gateways is not to be denied. From repeated attacks of colds or other causes certain portions of the nasal mucose in the neighborhood of the ostia are left edematous and hyperplastic. At various times, particularly when the patient is reclining, the blood pressure is higher in this locality, with consequent swelling and temporary occlusion of that particular ostium. The sinus mucosa in the meantime is absorbing the oxygen which is contained in the sinus, but, as no more can enter, there results within a condition of negative pressure, with swelling of, and transudation through the mucous membrane. Let us accept that, in a longer or shorter time, the ostium again becomes patulous with resolution of the swollen sinus mucosa. The membrane however does not have time to fully regenerate before the ostium again becomes occluded through the same causes. This constant swelling and irritation of the mucosa produces inflammatory changes which deprive it of a certain amount of vitality, thus causing it to offer a suitable culture medium for pyogenic bacteria the first time the individual contracts a severe acute coryza. The rationale above may also explain sinus infections during infectious fevers though here the preliminary occlusion is due to the general infection.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

Most of the pathology of a diseased sinus therefore depends upon the factor that it is a closed bony cavity lined with mucous membrane dependent upon an ostium for its nutrition and drainage. Of course, these factors must be considered as simply being added to the other general factors causing pathological changes and conditions in mucosae elsewhere. And in the method of nonsurgical treatment to be outlined you are to understand that it only applies to those cases where a ready return to normal can be secured by aiding the natural efforts at return and not to conditions or changes dependent upon tumor growth, tuberculosis, syphilis, necrotic changes of bone, etc. But please emphasize that as a method of prophylaxis against chronic sinus conditions, if used early enough, is its most acceptable field.

In the acute cases except, where pus has broken through the wall of the ethmoidal and frontal sinuses into the orbit, operative measures are inadvisable. By shrinking the turgescent membrane in the nose adjacent to the ostia with adrenalin and cocaine, and by applying suction followed by hot alkaline irrigation, the secretions and pus may be induced to flow. And if frequent treatments are administered the ostium will regain its patency and the infection will be overcome. All acute cases cannot be cured of course, but the high temperature, pain, and pressure tenderness will be relieved. Canulization can be done in a few cases with permanent relief. Hot steam inhalations carrying oil of pine, benzoin menthol, etc., will often start the flow of pus. In the first stages never give atropin or belladonna, as a flow of secretion, not its arrest is desired. Pot. Iodide, AmmAcetate, Dovers are indicated. Hot packs about head and free catharsis help.

In chronic cases untreated, or those becoming chronic under treatment, the following may be done:

Shrink tissues with 1 to 8000 adrenalin in rose water. Irrigate from one side to the other hot alk. sol. from a Douglas or other suitable syringe. This must be once or even twice daily. After cleansing negative pressure is induced in nose by suction and rest of pus emptied from sinuses. This pus such as does not enter receptacle of the instrument, described below, is again irrigated away. When reasonably certain that the sinus or sinuses are clear, then use pressure syringe to introduce such medication as is wished to act antiseptically on the lining pyogenic membrane of the diseased sinus or sinuses.

The instrument I have used is the best in my opinion of the several on the market viz. that of Coffin of New York. It consists as shown of a combined suction and pressure arrangement controlled by a valve turned by the operator as desired. A gauge not shown indicates in mm the amount of positive and negative pressure attained during operation. Applying the nasal piece to the patients nostril and having the patient close the other nostril tightly, he is then instructed to say "hook" or some similar word and to note the sensation of closure at the back of the oral cavity. When he can do this and hold the position required, suction to the desired amount is applied intermittently until on inspection little or no secretion or pus is seen in the nasal spaces above the lower turbinate, then alternating positive and negative pressure is used the positive pressure driving the medicated spray into the nose necessarily following into the sinuses as a vacuum had been obtained in them by the negative pressure or suction. As used by Coffin, Smith, Harris and Douglas of New York, Wald of Germany and Mink of Holland who developed the methods the following medicaments are used: 0.5 per cent iodine solution, increasing in strength until extravasation of serum takes place which removes pus not otherwise disturbed. Sulfate of zinc increasingly from one-half to two or three grains to the ounce, then varying strengths of silver nitrate and the colloidal silvers are used.

Each treatment is followed by a menthol

albolene spray to reduce the irritation caused by the severe astringents.

### General Treatment As Indicated.

Coffin and Harris, use it constantly with increasingly better results. Coffin said in a letter to me a few weeks ago, "You work for results, I use the method in both acute and chronic conditions. It is by no means a cure-all but results are very satisfactory." Harmon Smith is a little more enthusiastic and says: "I have some patients in whom chronic empyema had existed for so long that both sides of the nose were filled with polypi, and by this treatment alone the sinuses recovered, the polypi disappear and the patients have remained well for a period of over twelve months."

Personally I have to date treated fourteen cases of acute and chronic cases of sinusitis by the above method and the results have been most satisfactory. A history of one case of empyema of the left ethmoid will illustrate what can be done.

Mr. M., 39, salesman, came on February 20th with a diagnosis of empyema of left ethmoid. He had consulted two other specialists who advised opening and drainage, which he refused. I advised the same but as he refused told him that I would follow the above method to see what could be done. He was treated every other day for three weeks with loss of pain and pressure after the second day and with disappearance of all signs and symptoms on the fourteenth day. Was discharged then but desired the treatments longer and stopped them after three weeks. I saw him April 26th and he was in best of condition.

As a simple nonsurgical method for treatment of sinus infections it is unexcelled and as a method to be instituted early in sinus infections will abort many cases that otherwise would become chronic.

### Discussion.

**Dr. W. L. Dayton, Lincoln.**—The subject of Dr. Zemer's paper is an interesting one. Diseases of the accessory sinus, or sinusitis, are, I consider, a subject for the special society rather than for the surgical section of the general society. There are so many sides to it—so many phases that cannot be understood save by those who are working in that field. When a patient comes to you complaining of catarrh, no doubt he has some form of sinusitis. Now to determine which form—which sinus or what division of sinuses may be at fault is the thing. "There's the rub," because it was just pointed out by Dr. Wherry that the farthest back—the sphenoid—the one large sinus that is mostly a closed sinus—was the one at fault. It is the one the ordinary surgical man could never find. The danger is too great. It is bad enough for the specialist to do it.

In speaking of his treatment, the doctor spoke of the acute and the chronic. Of course about the acute, the question is where does the sinusitis begin, or where to separate? You have the one with the congestion; the inflammation. You have the other with probably the acute symptoms subsided, and the pus very profuse. The treatment for the two is decidedly different. The treatment for the chronic form which the medical man sees is that form where we have the frontal sinus, or the ethmoidal cells, involved. You can't give this patient of yours any assurance that he will not be reinfected, so that when you promise your patient a cure, you are saying something that perhaps you can't carry out. You may be able to stop the pus and stop the pain. But as we cure the disease, we can't do it; because we can't assure this patient that upon the same infection, or upon catching cold, the same condition may not continue that he had beforehand.

In regard to the suction apparatus, I believe Dr. Brawley of Chicago was the first one who advocated that in this country. Dr. Coffin has made quite an extensive suction apparatus for the same purpose.

The operation of Dr. Ballinger is an operation I do not countenance. I have seen fatalities after a Ballinger operation—one case in particular that died. There is no use of subjecting our patients to danger of their lives in order to cure a condition that can be remedied by local applications and the apparatus mentioned heretofore.

In regard to Dr. Wherry's paper, I simply want to say that no man with ordinary intellect can discuss a paper so comprehensive and full of technicalities from hearing it but once. It seems to me that if we can ask the doctor to continue his paper next year, and have the opportunity of reading his paper in the Journal, and get some ideas so that we might discuss it intelligently, it would be worth while. It is something that is new—new for us—and I can't attempt to make any scientific discussion of the paper.

**Dr. S. G. Zemer, closing:** Dr. Dayton was kinder in his discussion of my paper than I thought he would be. In trying to present a new method of treatment, there is always quite a bit of criticism. As I was very careful to state, I said this was useful in selected cases. I still think so. Our experience of sixteen cases this year, and about two hundred and fifty cases in the clinics of New York certainly bear out the statement I have made regarding this particular method of treatment.

He also suggests that the scope of this paper is not for a general society. I think that criticism has been answered by the doctor who spoke very kindly just a moment ago.

As a general treatment for any sinus infection, which can be used safely and satisfactorily, this method is certainly most effective. As for promising a cure, I do not think anyone can promise a cure in all cases even by a radical operation. In fact, I have seen several that have been draining for the past fifteen years.

## Granuloma Pyogenicum.

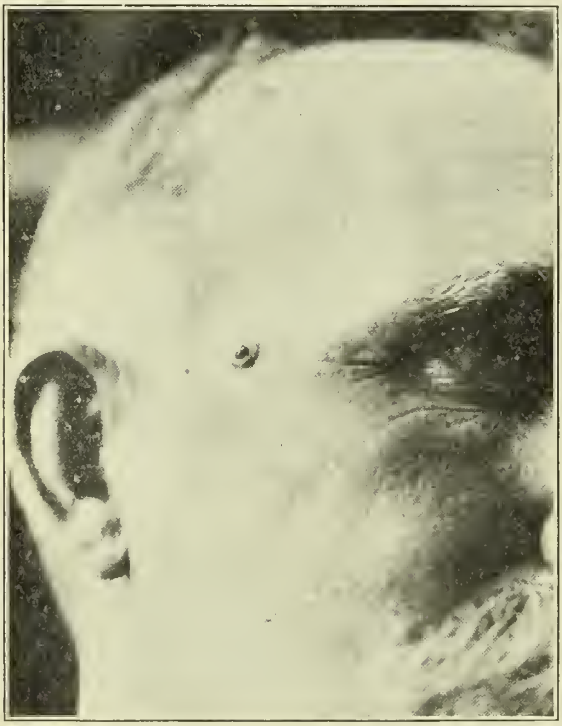
Report of Two Cases, by Michael G. Wohl, M. D., Omaha.

The following cases are reported because of the rather uncommon occurrence of the condition and secondly the lesion is often mistaken by the clinician for chancre or sarcoma.

Case No. 1, Mr. M. Age 48. Referred by Dr. W. Y. Thompson.

Patient has injured his face with a razor while shaving. About six weeks later he noticed a nodule the size of a small cherry at the site of injury. It was painless, however, it kept on getting larger.

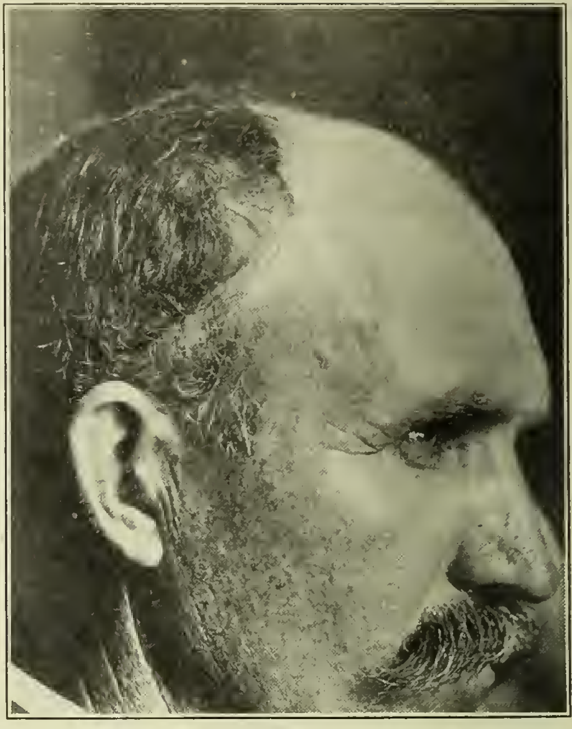
When patient presented himself, the lesion had a dark brown appearance; the edges were indurated. It appeared to be surrounded by a collar. The neighboring glands were not enlarged. (Fig. No. 1.)

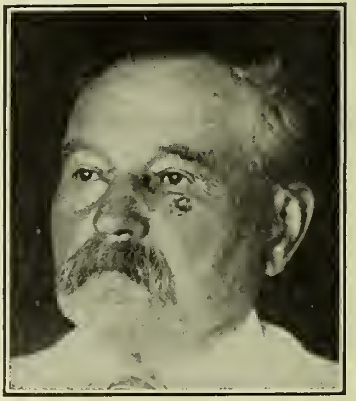


Because of the history of the injury, short duration of the condition, lack of grandular enlargement and appearance of the lesion, the diagnosis of Granuloma Pyogenicum was made.

The patient was given two full erythema doses of X-Ray by Dr. C. Ballard and in four weeks' time the tumor had entirely disappeared. (Fig. No. II.)

It is our opinion that the X-Ray treatment should be given in heavy doses in preference to the fractional method. The later being more of a stimulating character rather than destructive. This fact was impressed upon us by a case published elsewhere (1) in whom the lesion after one year's treatment by the fractional method has grown twice its original size. (Fig. 3.)

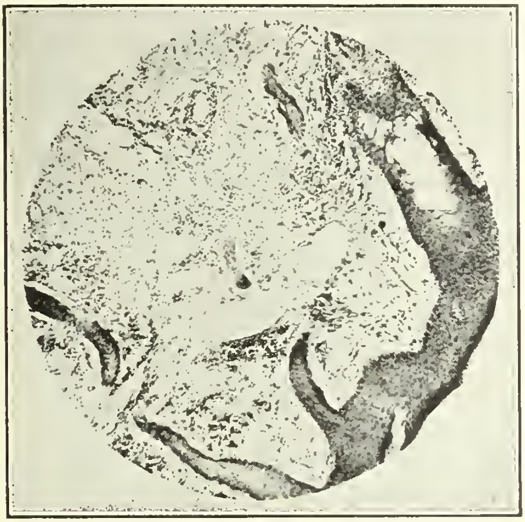




Case No. 2, Mr. R. Age 35. Case of Dr. St. Reed.

Patient injured tip of index finger of right hand while working on automobile. About two months later he discovered a tumor the size of a small pea at site of injury. It resembled a small pencil stuck through a piece of paper and was dark brown in color. The tumor was widely excised by Dr. Reed and lesion entirely healed.

Upon histological examination of tumor it presented a hypertrophy of the surface epithelium, however, there was no evidence of invasion of underlying stroma. The stroma was composed of newly formed connective tissue, rich in blood vessels; the structure resembling an angioma. There was dense round cell infiltration. Throughout the growth clumps of staphylococci were found. (Fig. No. IV.)



This condition was first discovered by (2) Poncet and Dor in 1897 under the name of Bothroyomycosis. Later (3) Bodin, Hartzell (4) and Wile (5) have proven it to be of staphylococcic origin and called it by a rather appropriate name: Granuloma Pyogenicum.

The prognosis in these cases is good as the tumor is innocent, however, the tumor should be widely excised or treated with heavy doses of X-ray; otherwise it is apt to recur and infiltrate.

REFERENCES: (1) Michael G. Wohl, New York Medical Journal, Jan. 20, 1917. (2) Poncet and Dor, Rev. de chir., 1897, XVIII, p. 996; Idem, Arch. gen. de med., 1900, XII, p. 129. (3) Hartzell, Jour. Cutan. Dis., 1904, p. 520. (4) Wile, Jour. Cutan. Dis., 1910, p. 662. (5) Bodin, Ann. de dermat et de syph., 1902, p. 289.

---

## Child Conservation a War Measure.

(Presidential Address by J. D. Reid, M. D., Pilger Read before the Mid-Summer Meeting of the Elkhorn Valley Medical Society, July 16, 1918.)

I come to you today with a paper on the above subject in the hopes that it may awaken an increased interest in one of the most important problems facing the nations in the great world crisis. Prior to the Chicago meeting last month my interest in the subject of child welfare was only nominal, and it was the thought that may be more of my colleagues in North Nebraska were in the same frame of mind that I was moved to write as I have.

At the present time the great nations of the world are pouring out their life's blood in an unprecedented volume; the human candle is being burned at both ends; the adult popualtion is being slaughtered by the hundreds of thousands; the child life is being limited by marked lowering of birth rates. To maintain poulation the nations are now without exception looking to the conservation of children. Before the outbreak of the war the governments in general paid a rather languid interest to their childhood but almost from the first days of the present outbreak measures have been instituted to better the conditions surrounding children and their mothers. It is as much a patriotic work to aid in the saving and bettering the chances of the child as it is to care for the wounded man on the field of battle. It all leads to the same in the end, saving to the state of valuable lives.

The importance of the work is brought home to us when we remember that the boys who represent us in the trenches twenty to twenty-five years ago were babies for the most part; they were the nation's and world's potential defenders. Never before has there been the stress laid on the well being and care of the child that there is being put forth now. The work is international in scope. I had the pleasure to attend the pediatrics section of the A. M. A. one day and heard papers and discussions on this subject by eminent physicians from both France and this country. Before the war France was a nation of notoriously low birth rate and since then it has still further diminished, in Paris fell from 48,917 in 1913-14 to 26,179 in 1915-16. The utmost effort is being put forth to save the lives of every baby possible that the nation may be able to recover itself in the years following the war. The work was organized there in August, 1914; public maternity hospitals and public service stations were established where in 1915 95 per cent of the women of Paris went for confinement. So conditions were better for the protection of mother and child than ever before. The mortality rate was markedly lowered for both. In the year prior to the outbreak Paris babies who did not have the benefit of a mother's care numbered 14,925, while in one year they were diminished to 4,954 showing what a public interest on a subject can do when once aroused. England realizing the strain she might be put to began the special care of mothers and children from the beginning. The Notification of Birth Act was rigidly enforced, all births being reported within 36 hours. This gave the authorities information as to where babies were and what they needed. Health visitors were sent to give required assistance. A government grant to aid local health authorities enabled them to carry on the work successfully. While economy was practiced in other lines, the government said there should be no stinting of the funds for this work. There is one full time health worker for every 800 births. These workers are found in all the cities and boroughs. The president of the local government board, whose death was recently announced, stated as his conviction that they were able to save 1,000 babies per week, that formerly were lost, which would go quite a ways in counteracting the loss on the field. As a result of the efforts put forth the 1916 mortality rate in England was the lowest on record, being 91 to 1,000 births.

A very interesting talk was given on the Belgian and repatriated French children by Dr. Lucas, of San Francisco, who has been at the receiving station in France where these children sent through Switzerland are received. One thousand two hundred are received daily, examined, bathed, fed, names taken, and moved to interior parts. Exact information in Belgium is difficult to get because of the Hun occupation, yet in the larger cities where information is available there is also shown a lowered mortality rate.

A great many institutions have been founded for children, this has been done under Red Cross supervision for the most part and has been made necessary by the vast number of children whose homes have been destroyed and parents killed or deported. Canteens to the number of 329 have been established where, according to Dr. Lucas' report, over 52,000 children per day receive milk and cereals. These centers are all under medical supervision, which accounts for the improved mortality rate. An interesting part of Dr. Lucas' talk was that among the children not over 2 per cent showed any signs of tuberculosis, that generally the children were healthy, though many of them had been within the sound of the guns for three years. Their chief food was coarse war bread but there seemed to be plenty of it.

Reports from Canada, Italy, New Zealand and elsewhere all give the same note of progress toward conservation of the child as a war measure.

I have given you this brief survey from foreign countries that you may have some idea of what other warring people are doing to maintain their population, and the great importance that is placed on the life of the child.

Now then, coming down to our own country, what is being done here? And what are the conditions to be met and overcome? The United States had done some work along this line as far back as 1912 when a children's bureau was established under the department of commerce and labor and later under the department of labor. This department is composed of a chief, at present Miss Edith Lathrop, and several assistants.

But before taking up the work as it pertains to the children I wish to call your attention to an allied and very important subject and that is the mother. This phase of the work, motherhood, is so intimately connected with child saving it is difficult to study one apart from the other. According to the report of vital statistics so far as they are available in this country, our record is not one to be proud of. In spite of the improved methods of handling labor cases, our knowledge of sepsis and anti-sepsis, the reports indicate that in the period from 1900 to 1913 there was a slow but steady increase in our mortality rate. The figures show approximately 15,000 women died in 1913 of diseases incident to childbirth. Of this number 7,000 died of sepsis, and 8,000 of other preventable causes, such as toxemia, hemorrhage, eclampsia, etc. That this is an appalling loss is needless to say. When it is brought to the attention of the medical profession I have faith to believe steps will be taken to stop it. There is nothing we, as a people and profession, can not accomplish when once aroused to the need of accomplishment.

I was never so proud of the fact of being a member of the medical fraternity as during the meeting in Chicago last month where the great things that are being accomplished in the army, under the authority of the government were rehearsed. This practical wiping out of this needless loss of women's lives at the time of life when they are of the greatest value to the state and to the family would be a small thing as compared with the many problems solved in the fields of sanitations and reconstructions of deformed men, and now recently the report of the discovery of the etiology of trench fever by American physicians. Allow me to make a comparison of childbirth mortality with some of the more prevalent diseases. We find in women between 15 and 44 years of age a death rate of 50.2 per 100,000, while the rate from the total population is 15.8 per 100,000. Following are death rates for some of the acute diseases:

| | 1900 | 1913 |
|---|---|---|
| Typhoid | 35per 100,000 | 17.8 per 100,000 |
| Diphtheria and Croup | 42 per 100,000 | 18.8 per 100,000 |
| Tuberculosis | Above 200 per 100,000 | 147.6 per 100,000 |
| Pneumonia | 180 per 100,000 | 130 per 100,000 |
| Pregnancy and Confinement | 12.8 per 100,000 | 14.9 per 100,000 |

These figures show what modern medicine is doing in the field of infectious diseases and how little it is doing in the most important of all fields to make the world safe for the child bearing woman. Many causes and remedies are proposed. Dr. Grace Meigs, of Washington, ascribes two chief causes. First, ignorance on the part of the laity of the dangers connected with child birth. There has been associated with this function a certain amount of fatalism and no small amount of superstition. Second, the lack of proper obstetrical care. This is where we are hit. Dr. Meigs charges this lack of care, first to the medical colleges for not giving the proper emphasis to this line of work, which naturally leads to lack of interest on the part of the physician. The solution of the problem in the final analysis is in the hands of each of us; a more careful supervision of the pregnant woman, periodical examination of urine, condition of bowels, clothing, exercise, foods, etc., and the use of our best skill at time of confinement. Cleanliness and time are the obstetrician's best allies in a vast majority of cases. If there is any one thing especially emphasized in recent obstetrical literature, it is the value of time. So let us employ these elements freely to the great benefit of our patients.

In taking up the study of children the bureau at once ran against a very different obstacle, namely, the lack of reports on which to form a basis to work from. By a comparative study, rating the death ratio in the areas of non-registration the same as for the registration area, it was computed by Dr. Cressy Wilbur, vital statistician of Census Bureau, that about 300,000 children under one year of age die each year. To get a tangent idea of the stupendousness of this loss let us see what it amounts to in ten years. It means the loss of a population greater than the population of the City of Chicago. It means that in each decade there is a population wiped out greater than the number of people in any of the following states: Alabama, California, Iowa, Kentucky, North Carolina, Minnesota, Wisconsin or Virginia. In fact, the report of Children's Bureau shows that in 1910 there were only 10 states in the union with populations as great as the wastage in a 10-year period. What does this mean? It means that being a baby is the most hazardous business in human existence, one speaker at the meeting said that, if we were to be born again we would be in three times more danger of death as babes than as soldiers in the trenches when grown up. If the same rate of mortality continued for eight years it is said all babies would be dead. Conditions which permit of a high infant mortality must necessarily conduce to a great deal of weakness in the nature of deformities of mind and body in those who are just able to get through this perilous first year. They are left to start life with an unsurmountable handicap. Not only is society a sufferer because of loss of precious lives from the point of view of population, but there is an economic loss. Prof. Irving Fischer, of Yale, has figured a dollar and cents value to the lives of individuals. It might be interesting as an academic thought to quote them.

| | |
|---|---|
| Value at birth | $ 90.00 |
| Value at 5 years | 950.00 |
| Value at 10 years | 2,000.00 |
| Value at 20 years | 4,000.00 |
| Value at 30 years | 4,100.00 |

After which values gradually shrink. From a dollars and cents view the loss mounts to huge totals. It is possible that it will be the economic side of the question that will bring forward sufficient agitation to get results in the field, as was the case in another field; the liquor problem for instance. What is being done to correct this loss is the next thing that presents itself to our minds. The Children's Bureau, in conjunction with the Woman's Council of National Defense, have designated the period from April 6, 1918, to April 6, 1919, as children's year and have started a propaganda for the saving of 100,000 babies during this year. Each state and county is to be given a quota of lives to save during this time. It will be up to us to make good on this work here at home. We, who are not in the army, can serve our country well by being more earnest and enthusiastic, if possible, in the care of these little ones in our charge in feeding, sanitary conditions, clothing, more detail in instructing mothers in the care of the child in such as clean nipples, danger of flies, evils of pacifers, and in older children, care of teeth, removal of tonsils and adenoids, as protection against rheumatism and loss of life from subsequent heart affections. These and many other apparently trivial things come to our attention daily in which we can be more diligent than we have been. The prompt reporting of all births is a very important work in which we can all have our part. Nebraska in 1910 reported 78.4 per cent of her births. The report for 1920 should be 100 per cent. It is not a burdensome duty for us to discharge, just a few minutes' work, and our vital statistics are complete. Without these figures it is not possible to ascertain facts in regard to mortality and births. No business man would think of conducting business by as loose methods as the state conducts one of its most important functions, that is, keeping the records of human life. In Europe such records have long been kept, but they have taken root slowly in this country. Now that laws are being passed regarding child labor, compulsory education, age of consent, etc., it becomes more and more clear that to enforce them a birth record must be made. The right of franchise, and recently the draft age and the probable universal military training of the near future all point to a careful complete registration of all births.

This was a point much emphasized in the National meeting. The work of the child saving effort as carried on so far has consisted of the weighing and measuring campaign of which you are all aware. At the meeting many physicians criticized the method as being of no value because the way by which it it was conducted. Dr. Meigs, who has charge of the medical side of all work for the Children's Bureau, defended the method by saying it was the best the department could devise under the circumstances. There were no funds to carry on the campaign so all voluntary organizations, women's clubs and societies of whatever kind that could be, were enlisted. One important function was at least well served and that is the focusing of the national eye on the importance of the child. One man from Boston stated that within ten days after the weighing and measuring campaign was over in that city the children coming to the outdoor clinic increased almost 50 per cent. Parents are anxious that their children be up to standard and are ready to do what they can to bring about that result. You have probably all been consulted since then by mothers concerning children underdeveloped. By this work the government is getting an idea, an inventory, rough though it may be, of its childhood; what their physical condition is, it can then institute follow up measures to correct the defects found and Dr. Meigs says this is the scheme and purpose.

A plan is being tried out of establishing welfare stations in communities where mothers and expectant mothers will be given advice, personal, and for their children. A teacher of pediatrics from the University of Minnesota reported how the work was developing in his state. One community had a welfare nurse employed. She called in expert assistance for one child and it resulted in a number of children being seen. From this there developed the community idea in which there was a welfare nurse helping mothers with their children and which was visited once in six weeks or two months by a welfare physician, who conducted a welfare clinic for children. At present this work has grown until five physicians are devoting a large share of their time to it, going from one community to another. This plan seems practical but would need the support of the state to carry it on fully as full time and especially trained physicians and nurses would be needed.

The Pediatrics Section urged that all physicians give this work of child saving their enthusiastic support and help bring about a better environment for the growing up boys and girls, which are any nation's greatest asset and for whom, as one speaker said, we are fighting this awful war. If things are not conducted as we think they should be, let us just help with the work as it is presented and by our assistance make it efficient.

Never before in the world's history has the child occupied so exalted a position in the nation's eyes, never were such measures taken to save it for future society. So in closing I pass to you this propaganda of the Children's Bureau: Save the child, do your bit by helping conserve the nation's crop of crops; its childhood ("And a little child shall lead them.")

---

## Constitution.

### ARTICLE I.—NAME OF THE ASSOCIATION.

The name and title of this organization shall be the Nebraska State Medical Association.

### ARTICLE II.—PURPOSES OF THE ASSOCIATION.

The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Nebraska, and to unite with similar Associations in other states to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interest; and to the enlightment and direction of public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

### ARTICLE III.—COMPONENT SOCIETIES.

Section 1. Component Societies shall consist of those county medical societies which hold charters from this Association.

Sec. 2.—Counties having five or more eligible physicians shall form county medical societies.

Sec. 3. In counties having less than five eligible physicians, such physicians may join neighboring county society.

### ARTICLE IV.—COMPOSITION OF THE ASSOCIATION.

Section 1. This Association shall consist of Members, Delegates and Guests.

Sec. 2 MEMBERS. The Members of this Association shall be the members of the component county medical societies.

Sec. 3. DELEGATES. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component county societies in the House of Delegates of this Association.

Sec. 4. GUESTS. Any distinguished physician not a resident of this state may become a guest during any annual session upon invitation of the Association or its Council, and shall be accorded the privilege of participating in all of the scientific work for that session.

### ARTICLE V.—HOUSE OF DELEGATES.

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies (2) Ex officio, the officers of the Association as defined in this Constitution, and (3) all ex-presidents residing and practicing medicine in this state.

### ARTICLE VI.—SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may provide for a division of the scientific work of the Association into appropriate sections and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed of members of component county societies.

### ARTICLE VII.—SESSIONS AND MEETINGS.

Section 1. The Association shall hold an annual session, during which there shall be held daily meetings, which shall be open to all registered members, delegates and guests.

Sec. 2. The time and place for holding each annual session shall be fixed by the House of Delegates.

### ARTICLE VIII.—OFFICERS.

Section 1. The officers of this Association shall be a President, President-Elect, two Vice Presidents, a Secretary-Treasurer, a Corresponding Secretary and Librarian and twelve Councilors.

Sec. 2. The President and President-Elect shall be elected for a term of one year. The Secretary-Treasurer, Corresponding Secretary and Librarian, and twelve Councilors shall be elected for terms of three years each, the Councilors being divided into classes so that four shall be elected each year. All of these officers shall serve until their successors are elected and installed.

Sec. 3. The officers of this Association shall be elected by the House of Delegates on the morning of the last day of the annual session, but no delegate shall be eligible to any office named in the preceding section, except that of Councilor, and no person shall be elected to any office who is not in attendance upon that annual session and who has not been a member of the Association for the past three years.

### ARTICLE IX.—FUNDS AND EXPENSES.

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by an equal per capita assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publications. Funds may be appropriated by the House of Delegates to defray the expenses of the annual sessions, for publication, and for such other purposes as will promote the welfare of the Association and profession.

### ARTICLE X—REFERENDUM.

The general meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the general meeting, submit any question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members, a majority of such vote shall determine the question, and be binding upon the House of Delegates.

### ARTICLE XI.—RECIPROCITY OF MEMBERSHIP AMONG STATE SOCIETIES.

To broaden professional fellowship among the State Societies the Nebraska Medical Association, by its President and Secretary, is ready to arrange with other State Medical Societies, having equal requirements, for the interchange of certificates of membership. Members removing from one of these states to another may thus avoid the formalities of re-election.

### ARTICLE XII.—THE SEAL.

The Association shall have a common seal, with power to break, change or renew the same at pleasure.

### ARTICLE XIII.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at an annual session, provided that such amendment shall have been presented in open meeting at the previous annual session, and that it shall have been sent officially to each component county society at least three months before the session at which final action is to be taken.

## BY-LAWS.

### CHAPTER I.—MEMBERSHIP.

Section 1. All members of the component county societies shall be privileged to attend all meetings and take part in all of the proceedings of the annual session, and shall be eligible to any office within the gift of the Association.

Sec. 2. The name of the physician upon the properly certified roster of members, or list of delegates, of a chartered county society which has paid its annual assessment shall be prima facie evidence of his right to register at the annual session in the respective bodies of this Association.

Sec. 3. No person who is under sentence of suspension or expulsion from any component society of this Association, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings until such time as he has been relieved of such disability.

Sec. 4. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. No member or delegate shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

Sec. 5. The Secretary of the Association is instructed to formulate a certificate of membership, which is to be furnished to the County Societies and which shall be signed by the officers of the State Association, and countersigned by the officers of the county societies.

Sec. 6. Card index cases and outfits are to be procured by the Secretary for county societies and paid for by the State Association.

Sec. 7. All dues must be paid by January 1st of the calendar year. If not paid on or before that date, thirty days grace will be allowed, when member will become delinquent.

### CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE ASSOCIATION.

Section 1. The Association shall hold an annual session at such time and place as has been fixed at the preceding annual session.

Sec. 2. Special sessions of either theAssociation or House of Delegates may be called by the President at his discretion or upon petition of twenty delegates.

### CHAPTER III.—GENERAL MEETINGS.

Section 1. The general meetings shall include all registered members, delegates and guests, who shall have equal rights to participate in the proceedings and discussions and, except guests, to vote on pending questions before it.

Sec. 2. The general meetings shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and the public, and to receive and dispose of reports of the same, but any expense in connection therewith must first be approved by the House of Delegates.

Sec. 3. No address or paper before the

Association, except those of the President and Chairman of Sections, shall occupy more than twenty minutes in its delivery; and no members shall speak longer than five minutes, nor more than once on any subject, except by unanimous consent.

Sec. 4. All papers read before the Association shall be deposited with the secretary of the section when read.

### CHAPTER IV.—HOUSE OF DELEGATES.

Section 1. The House of Delegates shall meet annually at the time and place of the annual session of the Association, and shall so fix its hours of meeting as not to conflict with the first general meeting of the Association, or with the meeting held for the address of the President and the annual orations, and so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent with their duties. But if the business interests of the Association and profession require, it may meet in advance, or remain in session after the final adjournment of the General Meeting. Every member, except president and vice president, of the House of Delegates, as defined in Article V. of the Constitution is eligible to vote. No delegate is eligible to any office except that of Councilor.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members or fraction thereof, but each county society holding a charter from this Association, which has made its annual report and paid its assessment as provided in this Constitution and By-Laws shall be entitled to one delegate.

Sec. 3. Ten of the registered members of the House of Delegates shall constitute a quorum, and all of the meetings of the House of Delegates shall be open to members of the Association.

Sec. 4. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body, in such a manner than not more than one-half of the delegates shall be elected in any one year.

Sec. 5. It shall, upon application, provide and issue charters to county societies organized to conform to the spirit of this Constitution and By-Laws.

Sec. 6. It shall divide the counties of the state into twelve Councilor Districts, and each shall be represented by a resident Councilor, to-wit:

### COUNCILOR DISTRICTS.

No. 1. Douglas, Sarpy.

No. 2. Lancaster, Cass, Otoe.

No. 3. Gage, Johnson, Nemaha, Pawnee, Richardson.

No. 4. Knox, Cedar, Dixon, Dakota, Antelope, Pierce, Wayne, Thurston, Madison, Stanton, Cuming, Boyd.

No. 5. Burt, Washington, Dodge, Colfax, Platte, Boone, Nance, Merrick.

No. 6. Saunders, Butler, Seward, Polk, York, Hamilton.

No. 7. Clay, Fillmore, Saline, Nuckolls, Thayer, Jefferson.

No. 8. Cherry, Keya Paha, Brown, Rock, Holt, Sheridan, Dawes, Sioux.

No. 9. Custer, Valley, Greeley, Sherman, Howard, Dawson, Buffalo, Hall, Grant, Hooker, Thomas, Blaine, Loup, Garfield, Wheeler, Logan.

No. 10. Gosper, Phelps, Adams, Furnas, Harlan, Franklin, Webster, Kearney, Chase, Hayes, Frontier, Dundy, Hitchcock, Red Willow.

No. 11. Lincoln, Perkins, Keith, McPherson, Gordon, Kimball, Cheyenne, Deuel.

No. 12. Scotts Bluff, Banner, Box Butte, Morrill.

And when the best interest of the Association and profession will be promoted thereby, organize in each a district medical society, to meet midway between the annual sessions of this Association, and members of the chartered county societies, and none others, shall be members in such district societies. When so organized from the presidents of such district societies shall be chosen the Vice Presidents of this Association, and the Presidents of the county societies of the district shall be the Vice Presidents of such district societies.

Sec. 7. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

Sec. 8. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

Sec. 9. It shall present a summary of its proceedings to the last general meeting of each annual session, and shall publish the same in the transactions.

Sec. 10. The minutes of the House of Delegates and Board of Councilors shall be printed separately and sent to State and Territorial Associations and to the American Medical Association with the request for like courtesies.

Sec. 11. The Secretary is instructed to notify each county society in the state of the number of meetings held by the House of Delegates and the attendance of their respective Delegates.

### CHAPTER V.—ELECTION OF OFFICERS.

Section 1. All elections shall be by secret ballot, and a majority of all votes cast shall be necessary to elect.

Sec. 2. The House of Delegates, on the first day of the Annual Session, shall elect a president pro tem, who shall preside in the absence of the President of the Association, and it shall select a Committee on Nominations, consisting of one delegate from each Councilor District. No delegate shall be eligible to appointment on this Committee who has not been three years an active member of this Association. It shall be the duty of the committee to consult with the members of the Association and to hold one or more meetings at which the best interests of the Association and of the profession of the State for the ensuing year shall be carefully considered. The committee shall report the result of its deliberations to the House of Delegates in the shape of a ticket containing the names of three members for the office of President-elect and of one member for each of the other offices to be filled at that annual session. No two candidates for President-elect shall be named from the same county. Said nominating committee shall be bound upon its honor not to divulge its deliberations, nor any part of the ticket agreed upon, until called for, as provided in section 3 of this chapter.

Sec. 3. The report of the nominating committee and the election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

Sec. 4. Nothing in this article shall be construed to prevent additional nominations being made by members of the House of Delegates.

Sec. 5. The officers of this Association shall assume their duties January 1st, following their election.

### CHAPTER VI.—DUTIES OF OFFICERS.

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require.

Sec. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of the President's death, resignation, removal or other disability, the Council shall elect one of the Vice Presidents to succeed him.

Sec. 3. The Secretary-Treasurer of the Association shall execute and deliver a surety bond in the sum of Two Thousand ($2,000) Dollars, and the expense of procuring such bond shall be paid out of the Association funds. He shall demand and receive all funds except as hereinafter provided, due the Association together with the bequests and donations and receipt for the same. He shall under the direction of the Board of Trustees, sell or lease any estates belonging to the Association, and execute the necessary papers and shall in general subject to such direction, have the care and custody of the finances of the Association. He shall pay money out of the Treasury only on a written order of the President, provided that such orders shall be effective only for the year in which they are made, and shall provide that all unexpended balances must be covered back into the Treasury of the State Association at the end of each year. Provided, further, that the Secretary-Treasurer shall have the right to exercise the prerogative of paying orders by installment, when made, for the Committees of the Association, such deferred payment not to interfere with the efficacy of the work. He shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands. He shall charge upon his books the assessments against each component county society at the end of the fiscal year, and perform such other duties as may be assigned to him.

Sec. 4. The Secretary-Treasurer, acting with the Committee on Scientific Work, shall prepare and issue programs for and attend all meetings of the Association and of the House of Delegates, and he shall keep minutes of respective proceedings in separate record books. He shall be custodian of all record books belonging to the Association. He shall collect and keep account of all funds of the Association which come into his hands except as hereinafter provided. He shall provide for the registration of the members and delegates at the annual session. He shall keep a card index register of all the legal practitioners of the state by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medican Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies and in the extension of the powers and usefulness of the Association. He shall conduct the official correspondence, notifying members of the meetings, officers of their election, and committees of their appointment and duties. He shall act as Chairman of the Committee on Scientific Work. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary-Treasurer may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he receive some compensation. The amount of his salary shall be fixed by the House of Delegates. The Secretary-Treasurer shall appoint an assistant Secretary who shall assist in the discharge of his duties and who shall serve without pay.

Sec. 5. The Corresponding Secretary and Librarian shall review such transactions of the other medical societies as he may receive, and present at each annual meeting a report of such matters contained in these transactions as he may deem of interest to this Association. He shall deliver to his successor in office all transactions in his hands.

Sec. 6. The duties of all officers, standing committees, and employees in any department of our Association work, shall begin the first day of the calendar year immediately following the annual Association meeting at which they were elected and terminate with the last day of the calendar year immediately following the annual Association meeting corresponding to the term of their office. All their reports shall cover the year ending December 31st just preceding the annual Association meeting.

## CHAPTER VII.—COUNCIL.

Section 1. The Council shall hold daily meetings during the annual session of the Association and at such other times as necessity may require, subject to the call of the Chairman, or on petition of three Councilors. It shall meet on the last day of the annual session of the Association for re-organization and for the outlining of work for the ensuing year. At this meeting it shall elect a chairman and a secretary, and it shall keep a permanent record of its proceedings. It shall through its chairman, make an annual report to the House of Delegates at such time as may be provided. Five members shall constitute a quorum of the Board of Council. The reports of all standing committees, which are presented to the House of Delegates shall be referred, without debate, to the Board of Councilors for their recommendation. At each annual meeting of the Association, the Board of Councilors shall recommend to the House of Delegates such appropriation and expenditure of the funds of the Association for the ensuing year as in their judgment is wise and expedient.

Sec. 2. Each Councilor shall be organizer, peacemaker, and censor for his own district. He shall visit each county in his district as often as in his judgment is necessary, for the purpose of organizing component societies where none exist, for inquiring into the conditions of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession in each county in his district to each annual session of the House of Delegates.

Each Councilor shall annually make a report of the deaths which have occurred in his district, and send the same, at least ten days before the annual meeting to the recording secretary of the Council, who shall put such reports into proper form and present the same to the general meeting. It shall be the duty of each Councilor to appoint honorary pall-bearers to represent the Nebraska State Medical Association at the burial of any member residing in his district.

The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the annual session of the Association.

Sec. 3. Collectively the Council shall be Board of Censors of the Association. It shall consider all questions involving the rights and standing of members whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the general meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of the county society, upon which an appeal is taken from the decision of an individual Councilor. Its decision in all such cases shall be final.

Sec. 4. The Board of Councilors are hereby constituted the Trustees of this Association, and shall have charge of the property and financial affairs of this Association. They shall audit the books covering all the financial transactions of the Association.

Sec. 5. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the public and the lay press. Such communications shall be officially signed by the Chairman and Secretary of the Council, as such.

Sec. 6. At the death, removal from the District, or removal otherwise from office of any Councilor, such vacancy shall be filled until the meeting of the next House of Delegates by the President of the Association, and a notice of the appointment shall be sent to the Secretary of the Board of Councilors and to the Secretary of the Association. Provided, however, that in the absence from any session of a Councilor, the President may name a member from the district affected, to act as Councilor pro tem.

## CHAPTER VIII.—COMMITTEES.

Section 1. The Standing Committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Journal and Publication.

A Committee on Nominations.

A Committee on Care and Prevention of Contagious Diseases.

A Committee on Medico-Legal Defense.

A Committee on Arrangement.

And such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

Sec. 2. The Committee on Scientific Work shall consist of the Secretary, who shall be Chairman, and the Chairman and Secretary of the Sections, who shall determine the character and scope of the scientific proceedings of the Association of each session subject to the instructions of the House of Delegates or of the Association, or to the provisions of the Constitution and By-Laws. Fifteen days previous to each annual session it shall prepare and issue a program.

Sec. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Recording Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of the public health and of scientific medicine. It shall keep in touch with professional and public opinion; shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence in local, state, and national affairs and elections. Its work shall be done with the dignity becoming a great profession and with that wisdom which will make effective its powers and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such time as may be arranged during the annual session.

Sec. 4. The Committee on Nominations shall be appointed and perform its duties in accordance with the provisions of Chapter V, Sec. 2, of these By-Laws.

Sec. 5. The Committee on Arrangements shall consist of the component society in the territory in which the annual session is to be held. It shall, by committees of its own selection, provide suitable accommodations for the meeting-places of the Association and the House of Delegates, and of their respective committees, and a bill of expenses for the same shall be presented to the House of Delegates for payment, and shall have general charge of all the arrangements. Its chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

Sec. 6. That at the future meetings of the Nebraska State Medical Association the expense incident to banquets, smokers, etc., for social entertainments must be assessed to the members participating therein, as is the custom in the American Medical Association, the pro rata cost to be estimated by the local committee and announced in the published program. It is to be understood that the lady members of the Association, the wives and daughters of the members of the Association, and lady visitors be invited to attend our annual banquets.

Sec. 7. The Committee on Care and Prevention of Contagious Diseases shall consist of three members. Under the direction of the House of Delegates it shall represent the Association in bringing about a better understanding among the public, of contagious diseases, especially tuberculosis: It shall employ all dignified means of educating the people concerning prevention and cure of tuberculosis: It shall cooperate with other departments of the Association to bring about better conditions of public hygiene and to secure better conditions of state care for the unfortunate individuals who may be a menace to their comrades: It shall have power to cooperate with any societies worthy of our support, which have for their aim the improvement of general health conditions. It shall at each annual meeting of the Association, make to the House of Delegates a report of its work for the year, giving as accurately as possible the actual health conditions as they exist for the state.

### CHAPTER IX.—THE JOURNAL.

Section 1. The House of Delegates shall establish and maintain an official Journal of the Nebraska State Medical Association, which shall be called the Nebraska State Medical Journal.

Sec. 2. The Journal shall be published monthly, and mailed to each member of the Nebraska State Medical Association, whose dues for the current year have been paid. It shall contain the papers and proceedings of the annual meeting with such other matter as may be of interest to the members.

Sec. 3. The Journal shall contain not less than 48 pages each issue and editorials shall be given a prominent place.

Sec. 4. The advertising policy of the Journal shall be that of the Journal of the American Medical Association and its Council on Pharmacy and Chemistry.

Sec. 5. The Committee on Journal and Publication shall consist of four members, of which the Secretary of the Association shall be one, Ex officio, and its Secretary; the other three members shall be elected by the House of Delegates as follows: One for one year, one for two years, and one for three years, and one member shall be elected at each annual meeting of the State Medical Association. The Committee shall have complete management of the Journal with power to contract for advertising and publication, and to censor any and all matter offered for either advertising or publication; to select an editor and business manager, which two positions may be held by one person, at the discretion of the Committee, and fix their compensation; to provide the necessary office expenses, stenographic and clerical help; to have entire charge of the financial affairs of the Journal unless otherwise ordered by the House of Delegates. The Committee shall make a full and complete report to the House of Delegates at each annual meeting. The business manager shall give bond to the Nebraska State Medical Association in such amount and in such manner as may be determined by this Committee; he shall receive all money due the Journal from the various sources, and deposit the same in a bank to the credit of the Nebraska State Medical Journal, as he may be directed by this Committee. All bills contracted for and approved by this Committee shall be paid from this fund by a voucher drawn against it by the business manager and countersigned by the Chairman of the Committee.

### CHAPTER X.—MEDICO-LEGAL DEFENSE.

Section 1. The Medico-Legal Defense Department of the Nebraska State Medical Association shall be under the supervision of a committee of three. This Committee shall be known as the Medico-Legal Defense Committee and shall consist of the Secretary of the State Medical Association who shall act as Secretary of the Committee, and two other members who shall be elected by the House of Delegates, according to Chapter VIII, Section 1, of the By-Laws governing our Association, and serve for the term of two years, provided that in the original organization of the Committee, one member shall be elected for a term of one year.

Sec. 2. On and after their election, it shall be the duty of this Committee to effect such organization as they may see fit and to adopt rules for their guidance and for the guidance of members of the State Medical Association in Medico-Legal Defense matters, not set forth in the Constitution and By-Laws. It shall be their duty to investigate all claims of malpractice against members as herein set forth, to adjust such claims in accordance with equity where possible, and if claim is unjust or damage sought excessive, to lend such help as they may deem proper, but they shall not pay or obligate the Association to pay a judgment against a member or court costs of any suit.

The Chairman of this Committee shall receive a salary of $25.00 per month, and $200.00 annually, or as much as may be necessary for office and traveling expenses. Members of the Committee except the Chairman and any member of the profession serving as witness, shall receive $10.00 per day for traveling expenses for all time used in defense service.

Sec. 3. The Medico-Legal Defense Committee shall elect a member of the Bar of Nebraska as a legal counsel of the Association, and is authorized to pay such counsel an annual retainer fee. The proper fees for defending members of the Association for alleged malpractice shall be paid out of the Medico-Legal Defense Fund, provided that the member has placed his case in the hands of the Association in accordance with the regulations adopted by the Association.

Sec. 4. All debts contracted by medicolegal defense work shall be paid by the Treasurer of the State Association from the Medico-Legal Defense Fund on warrants drawn by the Committee against the Treasurer of the Nebraska State Medical Association as provided by the Constitution and By-Laws.

Sec. 5. The Medico-Legal Defense Committee shall at each annual meeting of the State Association make to the House of Delegates a detailed report of all expense incurred and work done during the year next preceding the meeting.

Sec. 6. At the end of each year the sum of $1.00 for each member shall be set aside by the Treasurer of the State Association as a special defense fund to be called the Medico-Legal Defense Fund. This fund shall be kept separate from other moneys of the Association and shall be used only for legal defense of such members as shall have contributed to said fund and who are threatened with or prosecuted for alleged malpractice as herein set forth.

Sec. 7. Every member of the Nebraska State Medical Association who has paid all dues, assessments or other charges assessed or levied by the Nebraska State Medical Association for the current year shall be entitled to receive, without expense, upon application therefor, the services of an attorney and counselor at law in any action for malpractice brought against such member in any court within the state of Nebraska on the following conditions, and not otherwise:

Sec. 8. Any member desiring to apply for malpractice defense hereby provided shall immediately upon receipt thereof send to the Secretary of the Nebraska State Medical Association any letter, process of court or other evidence of threatened litigation in connection with such malpractice.

Sec. 9. It shall be the duty of the Secretary to forthwith examine the financial records of the Nebraska State Medical Association and if such member so applying is found to have paid all arrears, dues or other charges due to the Nebraska State Medical Association, the Secretary of the Nebraska State Medical Association shall forthwith send to such counsel the papers received from the applicant. If he shall find that such applicant has paid all arrearages due the Nebraska State Medical Association, a formal application for defense, containing authority for the said Association, through its attorney to defend the action and granting to the Association and its attorney sole power to conduct the defense thereof, and agreeing not to compromise or settle said claim for damages for said alleged malpractice without the consent of the Medical Association or its attorney. The said applicant shall furnish and return to the Secretary with his application duly executed, a full, accurate and complete history of his treatment of the case of which the alleged malpractice arose, giving dates, names of witnesses, nurses and other attendants, all of which information shall, upon its receipt by him be investigated by the Committee, and if the case is just, be forwarded by the Secretary of the Nebraska State Medical Association to the counsel of the Association.

Sec. 10. If, on the other hand, the Secretary finds that any member so applying, has not paid all arrearages as herein specified, then and in that case, he shall return at once to the applicant all papers or memoranda received by him from said applicant, together with a statement that he is not entitled to defense and the reason thereof.

Sec. 11. It is further understood between each and every member of the Nebraska State Medical Association that under no conditions will the Nebraska State Medical Association pay any sums awarded in settlement, compromise or verdict or otherwise, against any member sued for alleged malpractice, and each member in applying for services of the attorney of the Association in any malpractice case, shall agree not to obligate in any manner the Nebraska State Medical Association for any purpose. Further the Association will not obligate itself to defend any case instituted before the adoption of these articles nor any case started before the physician became a member of this Association.

Sec. 12. Upon the receipt of notice by the Secretary of the Nebraska State Medical Association, from a member of the Association, that suit has been commenced against him, the Secretary of the Medico-Legal Defense Committee shall forward to such member a blank form, which the defendant physician shall promptly fill out and return to said Secretary: Whereupon the Committee on Medico-Legal Defense shall require that a Committee, consisting of the President and the Secretary of the County Society of which the defendant is a member, and a third member chosen by the defendant himself, shall make prompt and searching inquiry into the case as presented to them by the defendant, including the diagnosis and treatment of the case and names of physicians, nurses and other persons having knowledge of the same and who may be summoned as witnesses. Whereupon said County Committee shall forward a full and detailed report of its investigations and especially, its conclusion as to the justice of assistance to the defendant in this particular case on the part of the Medico-Legal Defense Committee. Whereupon, said Committee, without loss of time, shall make its report with recommendations to the Medico-Legal Defense Committee of the Association.

### CHAPTER XI.—SECTIONS.

Section 1. Sections shall hold their meetings at such times and in such places as shall not interfere with the General Meeting.

Sec. 2. At each Annual Meeting a Chairman and Secretary shall be appointed by the President, the Chairman to serve for one year and the Secretary for two years, and both until their successors are appointed.

Sec. 3. All papers, communications and matters of technical or professional nature shall be referred to the Section to which they pertain.

Sec. 4. The Scientific Work of the Society shall be divided into two sections:

First: A Section General Medicine: Eye, Ear, Nose and Throat.

Second: A section on Surgery: Obstetrics, Gynecology and Roentgenology.

### CHAPTER XII.—ASSESSMENTS AND EXPENDITURES.

Section 1. An assessment of four dollars per capita on the membership of the component societies is hereby made the annual dues of this Association. The Secretary of each County Society shall forward its assessment, together with its roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association on or before January 31st of the following year.

Sec. 2. Any County Society which fails to pay its assessment, or make the reports required, on or before the date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

Sec. 3. All motions or resolutions appropriating money shall specify a definite amount or so much thereof as may be necessary for the purpose indicated and must be approved by the Council and House of Delegates on a call of ayes and nays.

Sec. 4. The Calendar Year is the Fiscal year of the Association. The dues, whenever paid, are for the current year. The Journal shall be sent, commencing with the January number irrespective of the time of joining.

### CHAPTER XIII.—RULES OF CONDUCT.

The principles set forth in the Code of Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

### CHAPTER XIV.—RULES OF ORDER.

The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rules of Order, unless otherwise determined by a vote of its respective bodies.

### CHAPTER XV.—COUNTY SOCIETIES.

Section 1. All County Societies now in affiliation with the State Association or those that may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and By-Laws, and having complied with the conditions imposed by this chapter, shall, upon application to the Secretary of the State Association, receive a charter from and become a component part of this Association, subject to the subsequent approval of the House of Delegates.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

Sec. 3. Charters shall be issued only upon approval of the Councilor of the District in which the county society is located, and shall be signed by the President and Secretary of this Association. The House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one component medical society shall be chartered in any county.

Sec. 5. Each county society shall judge of the professional and moral qualifications of its own members, but as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician, a graduate of a college which at the time of his graduation was considered in good standing, who is practicing, or who will agree to practice, non-sectarian medicine, shall be entitled to membership. Provided, however, that Licentiates who were admitted under the law of 1881 and registered as regular physicians and have continually practiced regular medicine in Nebraska may be admitted to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

Sec. 6. Any physician who may feel aggrieved by the action of the Society of his county in refusing him membership, or in suspending or expelling him, shall have the right of appeal to the Councilor of his District, and finally to the Council of the Association.

Sec. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly represent the facts, but in case of every appeal, both as a Board and as individual Councilors on District and County work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component society moves to another county, his name upon request shall be transferred, with cost, to the roster of the county society into whose jurisdiction he moves.

Sec. 9. A physician living in or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

Sec. 10. Each County Society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material conditions of every physician in the county, any systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. Whereas, it has become notorious that commissions are asked for and given; be it known that such practice is entirely against all ethical standards and is to be severely condemned. This Association hereby puts itself on record against such practices, and earnestly solicits the assistance of all county societies for the supression of this evil, even to the extent of the expulsion of such offenders. Tolerance of such practice upon the part of the county societies will be visited by the proper discipline from this Association.

Sec. 12. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do post-graduate and original research work, and to give the Society the first benefit of such labors. Official position and other preferments shall be unstintingly given to such members.

Sec. 13. At the last regular meeting in the fiscal year preceding the next annual meeting of the State Medical Association each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty members or fraction thereof, and the Secretary of the society shall send a list of such delegates to the Secretary of the Association, at least ten days before the annual session.

Sec. 14. The Secretary of each County Society shall keep a roster of its members, and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date and number of license to practice in this state, and such other information as may be deemed necessary. He shall furnish an official report containing such information upon blanks supplied him for this purpose, to the Secretary of this Association and Councilor of his District on or before December 31st of each year, at the same time the dues accruing from the annual assessment are sent in. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 15. No money expended by any member, or any county society, for any purpose whatever, if they expect to be reimbursed by the Nebraska State Medical Association, will be repaid by this Association, unless such expenditure has first been authorized by the Council of the Association.

### CHAPTER XVI.—AMENDMENTS.

These By-Laws may be amended at any annual session by a majority vote of all the Delegates present at that session, after the proposed amendment has been laid on the table for one day.

## Officers of the Nebraska State Medical Association for 1919.

| | |
|---|---|
| Col. J. M. Banister, President | Omaha |
| A. I. McKinnon, Vice President | Lincoln |
| F. W. Buckley, Vice President | Beatrice |
| J. M. Aikin, Secretary-Treasurer | Omaha |
| Roy Dodge, Assistant Secretary | Omaha |
| W. P. Wherry, Corresponding Secretary and Librarian | Omaha |

### COUNCILORS.

| | |
|---|---|
| A .P. Overgaard, First District | Omaha |
| H. J. Lehnhoff, Second District | Lincoln |
| A. W. Montgomery, Third District (Ad Interim) | Stella |
| A. E. Cook, Fourth District | Randolph |
| R. W. Byers, Fifth District | Nickerson |
| Frank Tornholn, Sixth District (Ad Interim) | Wahoo |
| H. E. Potter, Seventh District | Fairbury |
| J. P. Gilligan, Eighth District (Ad Interim) | O'Neill |
| G. I. Sellon, Ninth District | Broken Bow |
| S. F. Sanders, Tenth District | Holdrege |
| H. E. Mantor, Eleventh District | Sidney |
| A. J. Stewart, Twelfth District | Mitchell |

### COMMITTEES.

**Committee on Scientific Work**

| | |
|---|---|
| Joseph M. Aikin, Chairman | Omaha |
| J. S. Welch | Lincoln |
| H. E. Burdick | David City |
| B. W. Christie | Omaha |
| V. V. Smrha | Milligan |

**Committee on Public Policy and Legislation**

| | |
|---|---|
| Chas. L. Mullins, Chairman | Broken Bow |
| E. T. Manning | Omaha |
| Leopold Phelan | Grand Island |
| J. M. Banister | Omaha |
| Joseph M. Aikin | Omaha |

**Committee on Journal and Publication**

| | |
|---|---|
| F. A. Long, Chairman | Madison |
| W. O. Bridges | Omaha |
| Benj. F. Bailey | Lincoln |
| Joseph M. Aikin, ex officio | Omaha |

**Committee on Care and Prevention of Contagious Diseases**

| | |
|---|---|
| W. F. Wild, Chairman | Lincoln |
| S. R. Towne | Omaha |
| W. H. Wilson | Lincoln |

**Committee on Medico-Legal Defense**

| | |
|---|---|
| A. S. V. Mansfelde, Chairman | Ashland |
| Joseph M. Aikin, Secretary | Omaha |
| J. S. Welch | Lincoln |

**Committee on Arrangements**

(Not yet named.)

THE NEBRASKA STATE MEDICAL JOURNAL
Published monthly by The Nebraska State Medical Association.

J. M. Aikin, Managing Editor............Omaha
A. F. Tyler, Associate Editor............Omaha

Committee on Journal and Publication.
F. A. Long, Chairman............Madison
W. O. Bridges............Omaha
B. F. Bailey............Lincoln
J. M. Aikin, Ex officio............Omaha

Subscription $2.00 Per Year. Single Copies 20c Each

All communications should be addressed to
The Nebraska State Medical Journal,
476 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. III. October, 1918. No. 10

## Efficient Loyalty.

Our minimum quota to date for the Medical Reserve Corps of the Army and Navy is twenty per cent of our medical registration, which is 1565. Of these 476 have applied and been recommended for a commission in the M. R. C., 394 have accepted their commissions, 14 have not reported their acceptance, and 49 have not been able to qualify, leaving 21 pending action. We are second in the union in our percentage of accepted commissions. More than 1000 have either made application for memberships in the Volunteer Medical Service Corps or signified their willingness to do so. This latter group does not include those commissioned in the Medical Reserve Corps. These results have been made possible largely through the working of our County, State and National Medical organization scheme.

---

An interesting and instructive article appears in the Pennsylvania Medical Journal for May, 1918, by J. P. Crozer Griffith, M. D., Professor of Pediatrics in the University of Pennsylvania. Dr. Griffith is a mature man, not easily swayed in his opinion, and he presents a highly conservative article on the use of opium in children. He calls attention to the fact that the abuse of opium by the profession, and in the use of certain soothing syrups, has resulted in the abuse of the use of opium in any form. While he cautions against its indiscriminate use, he calls attention to certain conditions in which it may be of decided value.

1. For the relief of pain. It is rarely indicated in colic and yet in certain conditions where the pain is intense and convulsions are threatening, the use of opium will most quickly relieve the symptoms.

2. Cough. The writer here agrees with the essayist that occasionally in bronchopneumonia and sometimes in bronchitis, the cough is so harassing as to prevent the child from resting. Here in selected cases an opiate, by relieving the cough, will promote rest and be of benefit. Occasionally in severe spasmodic croup small doses of paragoric or dover's powder will give relief.

3. Convulsions. In convulsions not relieved by a warm bath, the enema, or bromids, morphine hypodermically in small doses is of decided benefit.

4. Heart disease. In certain cases of heart disease with the distress of failing compensation, in chronic endocarditis and myocarditis it will give relief and at the same time act as a cardiac stimulant.

5. Diarrhea. In the treatment of diarrhea opium should never be given in the early stages. In this condition I think infants are more than usually susceptible to opiates. However, when the case has become acute with frequent mucus stools, associated with tenesmus, the right use of opium is of decided value.

In conclusion: This article will repay a careful reading. It will warn against the indiscriminate use of opium, but it does call attention to the conditions in which it is indicated.

H. M. Mc.

---

## Annual Meetings.

October and November are, because of our delightful fall weather and good roads, auspicious months for county society annual meetings. Introduction of the social element on such occasions by inviting the ladies to meet with us and supplying a dinner or supper, the expenses to be paid out of the society funds, will enlarge the attendance and benefit all who attend.

Our Constitution and By-Laws printed elsewhere in this issue of our Journal should be carefully read by our members. Attention is especially directed to Chapter 12, Section 1, of the By-Laws, indicating the amount of our dues, when due and to whom they should be paid. The efficient county secretary will make it easy for us to part with the money necessary to cover our county society and State Association dues. He is the organization member in each county who silently evolves the dynamic, by releasing potential medical ability in our members. Ask him about payment of your annual dues.

If you are not enrolled as a member in the American Medical Association and a reader of our official Journal, you are depriving yourselves of first hand information on all departments of medical knowledge. Can you afford to ignore that splendid source of information?

A number of our county societies paid the 1918 dues of their members who are commissioned and absent in government service. That evidences the fraternal spirit of physicians. With more than 400 of our members now in actual government service, or soon to be called, we should not neglect payment of their 1919 dues. If our present enrollment is to be maintained the above action by county societies is imperative. Our present enrollment is 1133, the largest in our history. We have 1565 registered physicians in the state.

By an unintentional error we omitted from the September issue an article calling attention to a report by Dr. E. R. Hays, of Falls City to the splendid work he is promoting for preventing infant mortality and improving the health and sanitary conditions in the homes of ignorant or misinformed parents regarding the proper health and education of the babies. This plan appeals to us as commendable and worthy of adoption in many localities in Nebraska.

To the Medical Profession of the State of Nebraska:

Gentlemen:

No doubt by this time you have received a copy of the new rules and regulations. We have attempted to separate entirely the county from the city boards of health. Not that they do not interlace, but in order that the respecive duties may be clearly set forth.

Regarding the rules relative to communicable diseases, these are practically standard rules adopted by the American Public Health Association. While we know that in certain instances these rules will not meet with unanimous approval, still we believe that if carried out to the letter, they will control communicable diseases, and give the general public an idea as to what is required.

Should there be any questions that anyone desires answered, kindly write this Department, and we will be more than pleased to explain.

Very truly yours,

Nebraska State Department of Health.

### Why Should the Surgeon General Appeal for Medical Officers?

Of the 146,000 doctors in the United States, it is a safe calculation that at least 70,000 of this number are within the age limit, from 21 to 55 years, and are physically and morally qualified to serve as Medical Reserve Corps officers.

Why, in view of this fact, the Surgeon General's office should be hard put to secure a sufficient number of medical officers to supply immediate demands and to furnish a reserve force of between forty and fifty thousand doctors is not quite comprehensible.

Every qualified physician, knowing how essential his services are to his country at this particular time, should consider it not only his duty but a privilege to take part in this glorious struggle for humanity and democracy.

This is the time when individual opinion must be sacrificed for the benefit of the whole and the time is near when every doctor must be in one of two classes: either a member of the Medical Reserve Corps, United States Army, or in the Volunteer Medical Service.

If you are between the ages of 21 and 55 years, and there is a doubt in your own mind as to whether you are qualified or not, let the Surgeon General determine this matter by applying at once to your nearest Medical Examining Board for a commission in the Medical Reserve Corps.—(Taken from the Arkansas Medical Journal, August, 1918).

### GENERAL NOTES.

Army death rate, 2.18. Civilian death rate, 6.7. If you would live long, get into the army.

Larkspur is evidently not a food for cattle. Of the fifty-five hundred head killed on the national forest ranges in the last three years, ninety per cent are reported as poisoned by eating larkspur.

A new safety match is claimed to be windproof and waterproof and will be especially useful in modern warfare. It will burn five seconds in the face of a strong wind and when it goes out it will not start a fire, no matter where it is thrown.

The new telephone chair takes the place of both chair and 'phone table. The chair's one arm is higher than the regulation arm, while the 'phone is supported by a metal rod attached to the chair's front upright. The 'phone book rests on a shelf directly beneath the seat of the chair.

The fall meeting of the Missouri Valley Medical Society was well attended. A number of physicians from Missouri, Iowa and Nebraska, who came for the double purpose of attending the meeting and heading Dr. Franklin Martin present the purpose and plan for enrolling physicians in the Volunteer Medical Service Corps, were the recipients of much benefit and a pleasant meeting. Dr. Chas. Fawcett, of St. Joe, was chosen president and Dr. S. Grover Burnett, of Kansas City, was chosen secretary. The next regular meeting will be held in Des Moines.

Medical work at the North Siam Mission at Chiengmai has been greatly strengthened the past year by the presence of a representative of the Rockefellow Foundation's international health board. Dr. M. E. Barnes, the representative of the Rockefellow Foundation, has been engaged in intensive hookworm campaign in the city and province of Cheingmai since February, 1917. With the active assistance of Drs. McKean and Court of the North Siam Mission's medical work and Dr. Campbell, who has charge of the evangelistic work, he has made marked progress in stamping out this debilitating disease in the province. From February 7, 1917, to March 31, 1918, 14,429 people were examined, of which number approximately 75 per cent, or 10,786, were found to be infected. Of this number 8,387 have been willing to submit to treatment, and upon reexamination of 2,214 cases but 395 have been found infected. Once more there is being brought to the attention of the people of Siam the desire of Christian America to relieve the diseases of the body as well as those of the soul, a desire which has been so well exemplified by the Chiengmai Leper Asylum.

## STATE NOTES.

Our membership to date, Oct. 14, 1918, is 1133.

Dr. Elmer R. Porter has returned from army service to his private practice in Omaha.

Capt. James M. Patton, Base Hospital No. 49, now in France, has been given the rank of major.

Dr. Newell Jones, Omaha, has been appointed surgeon to the American Red Cross and will soon go to France with a hospital unit.

E. A. Hudson, of Edison, is seriously ill in the private hospital of J. L. Key, of Cambridge, who, assisted by J. L. Willis, of Araphoe, is caring for him.

Omaha, Neb., Sept. 12, 1918.—Dr. Morris Nielsen, of Blair, is at the Clarkson Memorial Hospital, Omaha, having just recently been operated on for duodenal ulcer.

Dr. Frank S. Marnell, Lincoln, assistant superintendent of the Nebraska State Hospital for Insane, Lincoln, has resigned to accept a position in the state hospital, Stockton, Calif.

The ban placed on public meetings in July, in Fairbury, on account of scarlet fever has been removed. Since the epidemic 350 houses have been quarantined, and six deaths from the disease have occurred.

Dr. Henry J. Lehnhoff, Lincoln, has been appointer a member of the advisory board of the state board of health to succeed Dr. Joseph J. Hompes, Lincoln, who has resigned to enter the military service.

Social Morality—Dr. Abby Virginia Holmes, Omaha, is disposing of her practice and will devote her entire time to lectures on social morality and sex education in colleges and universities and also in communities adjacent to training camps.

Dr. L. B. Pilsbury, Lincoln, superintendent of the Nebraska State Hospital for Insane, Lincoln, has resigned to enter the military service, and has been succeeded by Dr. James D. Case, Lincoln, who has been appointed acting superintendent.

Omaha, Neb., Sept. 18, 1918.—Dr. Alexander J. Young, police surgeon at the south side station, was married by the Rev. Dr. Robert L. Wheeler at his residence Monday evening to Miss Regina Gavin of Manchester, N. H., in the presence of immediate relatives. They will make their home at 2711 B street.

NORTHWEST PHYSICIANS MEET.—An adjourned session of the Northwest Nebraska Medical Society was held at Long Pine, August 16, at which the following officers were elected: President, Dr. Charles C. Root, Bassett; vice presidents, Dr. Hosea J .White, Ainsworth; secretary, Dr. James M. Tische, Wood Lake, and treasurer, Dr. Thomas J. Lawson, Long Pine. It was decided to eliminate the semiannual session, as so many of the members of the association are away on military service.

Personal—Dr. Albert P. Fitzsimmons, formerly of Tecumseh, but now treasurer of the Philippine Islands, is paying a visit to his old home.—Dr. Edward A. Hudson, Edison, is seriously ill as the result of a cerebral hemorrhage.—Dr. George M. White, Ingleside, has been appointed assistant superintendent of the Ingleside State Hospital.—Dr. Wilford H. Crutcher, superintendent of the State Orthopedic Hospital, Lincoln, has resigned to enter the military service.—Dr. Dellizon A. Foote, Omaha, was operated on at Rochester, Minn., September 18, and is reported to be doing well.—Dr. Charles W. Ervin, Lincoln, has been appointed assistant adjutant-general of the state.—Dr. Beverly A. Finkle, assistant superintendent of the Norfolk State Hospital, has been appointed superintendent of the State Orthopedic Hospital, Lincoln.—Dr. Lawrence B. Pilsbury, superintendent of the Lincoln State Hospital, has resigned to enter the military service.

## COUNTY SOCIETY NOTES.

Furnas county officers for 1919: President, E. A. Hudson, Edison; Secretary, J. M. Willis, Arapahoe.

A regular meeting of Saline County Medical Society was held at Dewitt public library on the evening of September 10th. At this meeting Dr.

Guy B. Cross, of DeWitt, and Dr. C. W. Keith of Tobias, were elected members of the Society. A report of the War Committee was made by Dr. Porter F. Dodson, and pretty generally discussed. Other matters pertaining to the medical profession were also discussed. Dr. Wadsworth M. Elliott, of Crete, a citizen of Canada, has recently been called to the colors at Saskatchewan, Canada. He expects to leave in a couple of days.

---

## Orders to M. R. C. Officers from Nebraska for the Month of September.

To Camp Bowie, Texas, base hospital, from Boston, Lieut. C. W. Way, Wahoo.

To Camp Dodge, Ia., Capt. G. H. Gilmore, Murray; Lieut. E. V. Neuman, Wausa.

To Camp McArthur, Texas, Capt. L. C. Adcock, Omaha.

To Camp Wadsworth, S. C., from Fort Riley, Lieut. J. P. Swoboda, Omaha.

To Camp Zachary Taylor, Ky., base hospital, Lieut. R. J. Stearns, Omaha.

To Fort Oglethorpe for instruction, Capt. J. J. Snipes, Lincoln.

To Fort Riley for instruction, Capts. E. I. Whitehead, Holdrege; R. M. Morrill, Lincoln; Lieut. J. E. Ingram, Harvard.

To Fort Sam Houston, Texas, Lieuts. W. S. Bartholomew, Marion; J. C. Storkan, Wilber.

To Camp Gordon, Ga., base hospital, Lieut. J. S. Leisure, Ingleside.

To Fort Oglethorpe for instruction Capts. F. P. Dorsey, Hartington; W. T. Carson, Hastings; H. C. Sumney, Omaha; Lieut. W. H. Crutcher, Lincoln.

To Fort Riley for instruction, Lieuts. A. E. Brix, Lexington; J. C. Follmann, G. J. Kadavy, Omaha.

To Camp Devens, Mass., base hospital, from Syracuse, N. Y., Capt. J. A. Henske, Omaha.

To Camp Meigs, Wash., for instruction and on completion to Camp Meade, Md., from Surgeon-General's Office, Capt. L. Crummer, Omaha.

To Camp Sherman, Ohio, as tuberculosis examiner, from New Haven, Capt. L. S. Robinson, Kearney.

To Camp Wheeler, Ga., base hospital, from Fort Oglethorpe, Lieut. J. S. McAvin, Omaha.

To Fort Riley, as tuberculosis examiner, from New Haven, Lieut. G. S. Reeder, Fremont.

To Washington, D. C., St. Elizabeth's Hospital, for instruction, from Camp Wadsworth, Capt. S. J. Stewart, Hastings.

To Aberdeen, Md., from Fort Oglethorpe, Ga., Capt. J. A. Trowbridge, Superior.

To Camp Hancock, Ga., evacuation hospital, from Camp Pike, Capt. H. A. Johnson, Tekamah.

To Camp Kearney, Calif., from Western Department, Lieut. O. P. Schnetsky, Schuyler.

To Fort D. A. Russell, Wyo., Capt. J. H. Plumb, York.

To Hoboken, N. J., from New Haven, Lieut. W. C. Becker, Papillion.

To Washington, D. C., St. Elizabeth's Hospital, Capt. S. J. Stewart, Hastings.

### COMMISSIONS OFFERED AND ORDERED TO DUTY ON ACCEPTANCE.

Sept. 14, 1918.

To Camp Gordon, Ga., base hospital, Lieut. J. S. Leisure, Ingleside.

To Fort Oglethorpe for instruction, Capts. F. P. Dorsey, Hartington; W. T. Carson, Hastings; H. C. Shumney, Omaha; Lieut. W. H. Crutcher, Lincoln.

To Fort Riley for instruction, Lieuts. A. E. Brix, Lexington; J. C. Follman, G. J. Kadavy, Omaha.

Sept. 21, 1918.

To Camp Pike, Ark., base hospital, Capt. F. W. Lake, Omaha.

To Fort Oglethorpe, for instruction, Lieuts. R. W. Fouts, Dawson; C. N. Coe, Wakefield.

To Fort Riley, for instruction, Capts. B. M. Deardorf, Clatonia; C. K. Gibbons, Kearney; C. L. Fahnestock, McCook; F. P. Reed, Weeping Water; Lieuts. J. M. McNally, Bellwood; G. E. Peters, Bloomfield; H. D. Lurvey, Omaha; J. M. Stoops, Scottsbluff.

To Fort Oglethorpe for instruction, Lieuts. C. C. Paxton, Archer; F. M. Andrus, Lincoln.

To Fort Riley, Lieut. J. L. Magill, Holdrege.

---

### NEBRASKA SUPPLEMENTARY LIST

Aug. 1 to 31, incl.

Recommended for Commissions M. O. R. C.

| | |
|---|---|
| James McNally, Bellwood | 1st Lieut. |
| Glen Elmo Peters, Bloomfield | 1st Lieut. |
| Benjamin Miles Deardorf, Clatonia | Capt. |
| Roy W. Fouts, Dawson | 1st Lieut. |
| Francis Patrick Dorsey, Hartington | Capt. |
| Joseph Everett Ingram, Harvard | 1st Lieut. |
| William Tecumseh Garson, Hastings | Capt. |
| Emory Ira Whitehead, Holdrege | Capt. |
| Joseph Socrates Leisure, Ingleside | 1st Lieut. |
| Charles Kimball Gibbons, 2nd Ave and 21st St. Kearney | Capt. |
| Wilford Hall Crutcher, Orthopedic Hospital, Lincoln | 1st Lieut. |
| Walter Thompson Garfield, Green Gables, Lincoln | Capt. |
| Ralph Marcellus Morrill, Lincoln | Capt. |
| Lawrence Bell Pilsburg, Nebraska Hospital for Insane, Lincoln | Capt. |
| James Johnston Snippes, 407 Funke Building, Lincoln | Capt. |
| Gabriel Eugene Halyama, Norman | 1st Lieut. |
| John Christopher Follman, 606 City Hall Bank Bldg., Omaha | 1st Lieut. |
| Godfrey Joseph Kadavy, 1956 South Fifteenth street, Omaha | 1st Lieut. |
| Frederick Williams Lake, 3871 Farnam Street, Omaha | Capt. |
| Homer David Lurvey, 488 Brandeis Building, Omaha | 1st Lieut. |
| Robert James Stearns, 460 Brandeis Building, Omaha | 1st Lieut. |
| Herbert Clayton Sumney, 1011 W. O. W. Building, Omaha | Capt. |
| James Norval Stoops, Scottsbluff | 1st Lieut. |
| Charles Benjamin Coe, Wakefield | 1st Lieut. |
| Fred Patrick Reed, Weeping Water | Capt. |

# ABSTRACTS.

## A State Wide Plan for the Prevention of Venereal Disease.

Reprint No. 455 of the U. S. Public Health Service. By Allan J. McLaughlin, Commissioner of Health of Massachusetts.

The expense entailed is (1) for state Wassermann labcratory, (2) for dispensaries over the state.

The state is to furnish arsphenamine free, and about $1,000.00 a year each for clerical and other expense for the dispensary. The arsphenamine through each dispensary as a center, is to be furnished throughout an established area, these areas to cover the state.

Gonorrhea may be treated in same or separate department.

Preferably these clinics should be attached to some existing institution, presided over by some qualified physician, with an assistant when needed, the chief expense being the nurse who should act as clerk and "follow-up" worker. No charge whatever is made for arsphenamine, but the clinics may be "pay" clinics or free according to local conditions.

Dispensaries should be located in larger cities and serve a wide area. They should keep in touch with Boards of Health, physicians, city officials, committees of public safety, large manufacturing plants, Chamber of Commerce, hospitals, nurses, druggists, the press, educators, and labor organizations.

Lectures should be given before any of the above groups.

To aid in qualifying physicians the Boston Dispensaries will train physicians who may need it.

This movement is now a national duty as a war measure.

Objectors are referred to the report of the National Council of Defense and of the Royal Commission of England, which declares the action imperative.

Instruction is to be given Massachusetts health officers on equipment, cost and supervision of dispensaries, also on prevention by lessening the foci of infection; on repressive, correctional and educational methods in relation to the activities of the clinic; also on its relation to its area and to the hospitals near.

Each officer is to cultivate the hearty cooperation of the profession and serve them with laboratory assistance through the state or other Wassermann laboratory. The frequent attendance of physicians is to be encouraged; several entrances to the clinic is advised, that consultation over referred patients may be held without disturbing the privacy of others.

A chief should have the complete confidence of medical men.

A woman nurse should attend the clinic for women. A male nurse may also be necessary.

The "follow-up" staff should be scientific and modern, in correlation with police and reformatory agencies for the care of the incorrigible, should study the sources of infection, cooperate with large employers, study the mentality of prostitute patients, keep track of parole cases, and look up cases in need of further treatment.

In the clerical service, stated hours should be well known to the profession when free arsphenamine may be obtained.

In many cities laws already exist by which carriers, chiefly prostitutes, may be controlled, but generally facilities are lacking, especially in hospitals. Laws may be needed to secure the reporting of veneral disease, as well as to eliminate quack and drug clerk treatment, or for the examination and treatment of prisoners.

From the first report of a case the name is omitted. Later if the patient fails to appear for six weeks for treatment his name is reported to the State Department of Health with his serial number. When going to a second doctor for treatment, if he will give the name of the first a report is sent also to the first physician.

A carefully prepared circular of instructions is given to each patient.

About half our states (24) are reported as taking up a plan for the treatment of venereal disease. The Health Department of Nebraska is reported to have secured an appropriation for this purpose from the national government. No doubt medical men here may soon be expected to get in line by reporting their cases. In aiding to win the war, Nebraska will, as always, take a front seat.

S. R. T.

### Treatment of Septic Abortion.

Defining as an abortion every premature delivery up to about the sixth month, E. Ries (Surg., Gyn., and Obst., 1918, XXVI, 400) advocates the following treatment:

If a patient with septic abortion is admitted to the hospital, expectant treatment is followed until the abortion is completed spontaneously. Rectal examination is used exclusively and that as rarely as possible. The patient is kept in bed and on a light diet. If severe or protracted slight hemorrhage makes interference unavoidable, the uterus is packed. The packing is removed after twelve to twenty-four hours and frequently the whole remnants of the abortion come away with the packing. If not, the packing has usually dilated the cervix sufficiently so that the uterus can be emptied manually. Repeated packing is not favored as dangerous in itself. If the uterus is not empty after the removal of the packing it is emptied preferably by hand, if necessary after additional dilatation with Hegar's dilators and if the hand is insufficient, with the sharp currette. The longer the interval between the last rise of temperature and the operation the better. Packing afterwards is avoided, unless necessitated by severe hemorrhage. The uterus is never irrigated. Ergot is given only when hemorrhage exists after complete evacuation of the uterus. Vaginal douches are never given until at least a week after the abortion and then only for subinvolution, not for purulent discharges. If the temperature is normal after the abortion, the patient is allowed out of bed at any time she feels ready, unless she is very anemic. She is fed well as soon as possible, and is discharged three days after the last rise of temperature, unless anemia, subinvolution, etc., require longer hospital treatment. Rectal examination is repeated before discharge.

A. B. S.

---

### Abstract from J. A. M. A., August 31, 1918.

Before the section on surgery general and abdominal, C. H. Mayo presented a paper on The Principles of Thyroid Surgery bringing the thyroid problem up to date. There are three surgeons who have paved the way and brought out all the refinements in goiter surgery to date, viz.: Theodore Kocher we might say gave it a start, Mikulicz and C. H. Mayo refined the technic and brought forth the proper indications. To date the Mayo Clinic has operated over twelve thousand cases of goiter and as in many other branches of surgery this great clinic represents the supreme court where many problems are worked out in a practical manner **for the benefit of the patient.** Further progress in surgery of the thyroid must await biochemical investigations which Kendall and Plummer are working on at the present time. Kendall having discovered the active agent of the thyroid in a crystalline form and Plummer through his metabolic studies and apparatus both linked with the best surgical judgment and skill in existence make this clinic a unit from which we may expect the final solution of this great problem. Wilson and Plummer long ago cleared the atmosphere of the clinical pathology of this gland which before represented such a chaotic state as evidenced even by modern text books today.

We have known for sometime that in hyperthyroidism an increased metabolism occurred and that we operated to simply check this biochemical change by resecting a certain amount of the inciting agent, the hyperplastic gland. We also knew that we were about seventy-five per cent successful, the remaining twenty-five per cent remaining as before. Plummer has long felt that the thyroid secretion acted upon the cell direct and that by studying the elimination of the product of this cell ($CO_2$) he would be able to determine just how much of the gland approximately should be resected and when or when not to operate. It is not conceived by most surgeons that in some of these cases, although marked external symptoms are present, the thyroid is "burned out" and the symptoms are due to a remaining and permanent anatomical pathology, an aftermath of a too long endured chemical pathology and any surgical procedure here is of no avail (Roeder). Plummer has shown that the average metabolic rate of exophthalmic goiter cases is fifty-seven per cent above normal, which is reduced to thirty-nine per cent plus by ligations and further reduced to nineteen per cent by resection. These procedures simply reduce the output (Kendall's thyroxin) from the factory (thyroid) which has been working overtime, the product of which being a self activator, produces this vicious circle (exophthalmic goiter). Plummer's studies are of the utmost value and shall no doubt tell us just when to break this circle and how many of the toxic links (thyroid tissue) should be removed. The other form of toxic goiter, the degenerating adenomata has no influence directly on the metabolic rate, simply producing their symptoms by direct attack on the various organs by producing an abnormal and highly toxic protein (?) formed by a modified form of necrosis which is absorbed without chemical change representing a correlation to a toxic dose of snake venom. To Mikulicz we owe the technic for operating upon this type.

The goiters of adolescence have very seldom an indication for surgery, simply representing an enlarged source of supply of thyroxin et al which is demanded at that time. The thyroid demands an abundant study not only of the surgical technic which is difficult but also of general biochemistry over which it has such an important control; it might be considered the carburetor of the body.

C. A. R.

### Abstract J. A. M. A., September 7, 1918.

No more difficult situation has confronted the surgeon than Elephantiasis as up to date its etiology has been obscure and its relief still less understood. An obstruction of the lymphatics by some inflammatory process has been accepted by the profession, but any method to overcome this obstruction such as implantation of unabsorpable suture material have all met with unsuccess until Kondoleon, surgeon of Athens, Greece, in 1912, presented a method which has produced the most satisfactory results to date. His theory elaborated from other constructive work by Lanz, Oppel and Rosanow contained the idea that if the superficial lymphatics, which were obstructed, could be connected with the deep, which were unimpaired a possible absorption of this obstructed lymphatic fluid would take place. The superficial and deep lymphatics of the leg are separated enroute by the deep fascia and after dissecting out long strips of this fascie and attached fat, Kondoleon obtained by far the best results of any surgeon to date. In further corroboration of Kondoleon's theory W. E. Sistrunk of the Mayo Clinic reports seven cases operated by this method with results successful enough to warrant this procedure as a distinct advance in the treatment of this disease.

C. A. R.

### BOOKS RECEIVED DURING SEPTEMBER.

C. V. Mosby Co., St. Louis, Mo. Physiology for Nurses, Haskell; Surgical and War Nursing, Barkley; Hygiene for Nurses, Mumey; Nursing in Diseases of Children, Leo-Wolfe.

W. B. Saunders Co. Gynecology, Graves; Surgical Treatment, Warbasse; Military Hygiene and Sanitation, Keefer; Orthopedic Treatment of Gunshot Injuries, Mayer; The Prudential Insurance Company of America; Army Anthropometry and Medical Rejection Statistics, Frederick L. Hoffman.

### Book Review.

**Military Surgery of the Zone of Advance.** (Medical War Manual No. 7, by George de Tarnowsky, M. D., F. A. C. S., Major M. C., U. S. R., A. E. F. Cloth pp 330, Lea and Febiger, 1918).

All members of the medical profession are now taking a great interest in military surgery; especially the methods of treatment and the methods of handling the great number of cases. The author meets a demand in giving us practical, first hand methods as they are used at the front. The French and English advance work is given in detail from personal observation. In the actual treatment of the cases, detailed work is largely omitted, giving only the general methods of action and treatment, leaving the details to the individual. He lays special emphasis on the prompt and proper treatment of small lesions, leaving the larger and more serious to be cared for farther back.

W. H. Taylor, M. D.

### Soldier Insurance.

"I rejoice with you and our heroic men on this just and humane provision the generous American people have made for them and I am proud to have the Treasury Department administer this great law. Please congratulate the men of your gallant force for me on the wisdom they have shown in taking the benefits of the insurance law, and congratulate them particularly for me on the glorious work they are doing on the desecrated soil of noble France for suffering humanity and world freedom. Every American heart is thrilled by the valor and achievements of our splendid sons." (Secretary McAdoo's cable to Gen. Pershing).

### Allotments to Soldiers' Dependents.

Allotment to dependents of United States soldiers have increased from 10,000 at the beginning of the war to 800,000. For the month of May these allotments total $5,000,000. Thirty thousand commisioned officers are allotting $1,000,000 a month to their families; noncommisioned officers and privates, $4,000,000.

In addition nearly $50,000,000 of Liberty loan bonds of the second Liberty loan will have been paid for by the members of the Army and will be turned over to purchasers during August, the payments having been made out of allotments made for the purpose.

There are enemy aliens and there are native aliens. The American who does not do his part toward winning the war, who neither fights nor works nor lends for victory is as much an alien to America's purposes and America's cause as the rankest Prussian interned in this country. This is a war of peoples as well as of nations, and each individual has a place and a duty. Decrying conscription and refusing voluntary service because immediate good business interests would be sacrificed, is selfishness and disloyalty personified.

### Meningitis in the Newborn and in Early Infancy.

By Moses Barron, M. D., Minneapolis, Minn.

The author notes that though this disease is quite common in childhood, it is exceedingly rare during the early months of infancy. He reports being able to find only thirty-nine cases in infants under three months old. After discussing the etiology, reviewing the literature, giving a case report, and adding his comments, he records the following general conclusions:

1. Meningitis in the newborn and in early infancy is a rare disease.

2. The important place that the bacillus tuberculosis holds in the meningitis of later infancy the bacillus coli occupies in the early months of infant life.

3. Pathogenic strains of bacillus coli may show marked variations in form, in rates of fermentation and in motility.

4. The avenues of infection of the newborn have not been definitely established. Nevertheless, infection through the mouth by means of fingers or instruments of the accoucheur must always be borne in mind and proper precautions taken accordingly.

5. It is reasonable to believe that some infections occur in the bathtub through water that has become contaminated. The portals of entry of the bacteria may be either through the external auditory canals, the mucous membrane of the mouth, the Eustachian tubes or the intestinal tract.

6. The susceptibility of infants to infection with organisms, that are otherwise only slightly pathogenic, may be explained by the feebleness of antibody production during the early months of infancy. The greater resistance of breast-fed infants over the artificially fed ones is probably due to the compensation of the passive immunization by the breast milk for the active immunization which is still deficient.—(The American Journal of the Medical Sciences, Sept., 1918).

In sentencing the pastor of a German church who had been guilty of seditious language, Judge Amidon, of North Dakota, spoke words that should be heard throughout all our country. He said: "You have taken out papers of American citizenship. By the oath which you then took you renounced and abjured all allegiance to Germany and its emperor and swore allegiance to the United States. Have you done it? You have cherished everything German and stifled everything American. You have preached German, prayed German, read German, sang German. Every thought of your mind and every motion of your heart through all these years has been German. Your body has been in America, but your life has been in Germany. If you were set down in Prussia you would be in harmony with your environment. It would fit you as a flower fits the leaf and stem of the plant on which it grows. There has been a good many Germans before me in the last month. They, like yourself, have lived in this country from 10 to 40 years and they had to give their evidence through an interpreter. As I looked at them there was written over every one of them, 'made in Germany.' American life had not dimmed that mark in the least. It stood out as bright and fresh as an inscription upon a new coin. There must be a new interpretation of the oath of allegiance. It has become but a formula of words. From this time on it must be translated into the life and character of every foreigner who has his dwelling place within our midst. Foreign ideals and loyalty must cease; and American thoughts and ideals must be cherished. The sentence I am imposing upon you is not only to punish you for disloyalty, but to serve notice on you and all your kind that the end of the regime which you have been following has come; and you must set about the growing of an American soul inside of you."

The Secretary of the County Society will please notify the State Secretary immediately of any error or change in their officers.

# Directory of the County Societies of the Nebraska State Medical Association 1918.

| COUNTY | PRESIDENT | SECRETARY |
|---|---|---|
| Adams | W. S. Fast, Ingleside | J. B. McPherson, Hastings |
| Boone | No President Given | G. W. Sullivan, St. Edward |
| Boyd | J. R. Beatty, Butte | R. C. Hawkins, Butte |
| Box Butte | L. W. Bowman, Alliance | C. E. Hershman, Alliance |
| Buffalo | L. M. Stearns, Kearney | G. K. Gibbons, Kearney |
| Burt | I. Lukens, Tekamah | W. C. Keettel, Lyons |
| Butler | E. E. Miller, David City | R. G. Rich, David City |
| Cass | J. M. Neeley, Elmwood | N. D. Talcott, Greenwood |
| Cedar-Dakota-Thurston-Wayne | No President Given | F. G. Dewey, Coleridge |
| Chase | A. B. Fellers, Palisade | E. M. Stewart, Imperial |
| Cheyenne | L. G. Simon, Sidney | J. G. Swatslander, Sidney |
| Clay | J. E. Ingram, Harvard | J. W. Archard, Clay Center |
| Cuming | H. S. Summers, West Point | Lincoln Riley, Wisner |
| Custer | F. A. McGrew, Comstock | Madge Potts-Raines, Brok. Bow |
| Dawes | No President Given | R. L. Ivins, Crawford |
| Dawson | J. H. Fochtman, Cozad | E. C. Stevenson, Gothenburg |
| Dixon | E. J. Fleetwood, Wakefield | C. L. Phillips, Dixon |
| Dodge | S. A. Preston, Fremont | Charlotte P. Seiver, Fremont |
| Fillmore | J. Bixby, Geneva | V. V. Smrha, Milligan |
| Franklin | D. Neville, Hildreth | Ella P. Sumner, Bloomington |
| Furnas | L. W. Rork, Oxford | J. K. Muldoon, Arapahoe |
| Gage | D. C. Griffith, Beatrice | H. R. Brown, Beatrice |
| Hall | David H. Carson, Grand Island | Andrew J. Baker, Grand Island |
| Hamilton | E. A. Steenberg, Aurora | I. W. Haughey, Aurora |
| Harlan | W. G. Rundle, Orleans | S. M. Baker, Alma |
| Holt | Lew A. Carter, O'Neill | J. P. Gilligan, O'Neill |
| Howard | Edward Dodds, Boelus | Adolph H. Holm, Wolbach |
| Jefferson | C. A. Heath, Fairbury | H. E. Potter, Fairbury |
| Johnson | A. B. Cramb, Tecumseh | Truman E. Fairall, Tecumseh |
| Kearney | A. S. Marstellar, Wilcox | W. H. Powell, Minden |
| Knox | E. V. Neumann, Wausa | C. H. Swift, Crofton |
| Lancaster | R. B. Adams, Lincoln | A. L. Smith, Lincoln |
| Lincoln | Lucas Vorhees, North Platte | T. J. Kerr, North Platte |
| Madison | A. N. Howley, Norfolk | E. L. Brush, Norfolk |
| Merrick | C. S. Minnich, Palmer | J. E .Benton, Central City |
| Nance | L. A. Delanney, Belgrade | F. W. Johnson, Fullerton |
| Nemaha | B. F. Lorance, Auburn | I. W. Irwin, Auburn |
| Nuckolls | W. F. Mitchell, Superior | J. A. Trowbridge, Superior |
| maha-Douglas | A. F. Tyler, Omaha | Roy A. Dodge, Omaha |
| Otoe | Wm. Yager, Nebraska City | A. P. Ginn, Nebraska City |
| Pawnee | E. L. McCrea, Table Rock | J. F. Pendergast, Pawnee City |
| Phelps | J. L. Magill, Holdrege | P. A. Sundbury, Holdrege |
| Pierce | W. S. Dinsmore, Pierce | F. H. Nye, Plainview |
| Platte | F. E. Lemar, Humphrey | A. G. Lueschen, Columbus |
| Polk | C. L. Le Mar, Osceola | L M. Shaw, Osceola |
| Red Willow | Z. L. Kay, McCook | C. L. Fahnestock, McCook |
| Richardson | E. R. Hays, Falls City | C. P. Fordyce, Falls City |
| Saline | T. I. Wigim, Dorchester | Howard W. Quirk, Crete |
| Saunders | E. W. McCaw, Colon | M. A. Quincy, Ashland |
| Scottsbluff | Clyde N. Moore, Scottsbluff | W. P. Hodnutt, Scottsbluff |
| Seward | J. J. Morrow, Seward | H. J. Wertman, Milford |
| Sherman | A. E. Wanek, Loup City | Mary A. K. Hendrickson, Loup City |
| Thayer | H. A. Herney, Deshler | O .R. Platt, Hebron |
| Valley | No President Given | C. I. Miller, Ord |
| Washington | Jas. B. Anderson, Kennard | G. A. Langstaff, Blair |
| Webster | A. L. Ambrose, Guide Rock | H. S. Reed, Guide Rock |
| York | George P. Shidler, York | B. A. Root, York |

THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, LINCOLN, MAY 19, 20, 21, 22, 1919.

CONTENTS.

| | Page |
|---|---|
| Indications for and Results of the Use of the Metal Bone Plates, Bone Graft, and Conservative Methods in the Treatment of Fractures, A. F. Jonas, M. D. | 329 |
| Complemental Jejunostomy, A. I. MacKinnon, M. D., Lincoln | 335 |
| Results of Tonsillectomy, Louis B. Bushman, M. D., Omaha | 338 |
| Infantile Scurvy, W. O. Colburn, Lincoln | 340 |
| Sidelights on Carcinoma, O. C. Morrison, M. S., M. D., Carroll, Iowa | 342 |
| Thrombosis and Embolism of the Mesenteric Vessels, Byron B. Davis, Omaha | 345 |
| The Law As It Is Practiced by Lawyers. How Much Of It Do We Want? J. L. Sutherland, Grand Island | 349 |
| Editorial | 354 |
| Extract from Letter from Maj. E. L. Bridges, Base Hospital No. 49, Allerey, France | 355 |
| Birth Statistics in the Registration Area of the United States, 1916 | 356 |
| Abstracts | 357 |
| Venereal Disease Control | 357 |
| Nebraska Supplementary List, Sept. 1 to 25, Incl. | 358 |
| State Notes | 359 |
| Deaths | 359 |
| Orders to M. R. C. Officers from Nebraska for the Month of October | 360 |
| Commissions Offered and Ordered to Duty on Acceptance | 360 |

## Indications for and Results of the Use of the Metal Bone Plates, Bone Graft, and Conservative Methods in the Treatment of Fractures.*

A. F. Jonas, M. D.

The following communication is being made at the request of the chairman of the Surgical Section of this Society. The writer having had a considerable experience in the operative treatment of fractures, using many different methods and materials, has decided to confine the contents of this paper to metallic plates and bony transplants both living and devitalized boiled bone. The literature will be only briefly considered because it has become so vast as to be beyond the limits of a brief paper.

It is important to keep in mind that the average case of fracture is treated by the general practitioner. He makes a manual adjustment and his results, as to function, are usually good. He has learned to control his cases by the assistance of skiagrams. He knows that when coaptation of the broken ends cannot be attained, an open operation is indicated. Experience has shown that only those fractures that cannot be reduced by hand and be maintained by suitable fixation splints, are operative cases. Our discussion will be limited to such fractures.

The surgical world, during the past ten years or more, has manifested the greatest possible activity in the open operative methods, in the management of fractures. Among the many operators of note, both abroad and in this country, there is one commanding figure whose influence has been far reaching and whose advocacy of open operation has done more than all others to induce, particularly American surgeons, to resort to this practice. Sir Norbothnot Lane whose persistant advocacy of the immediate correction of fractures, and his own phenominal success, has made this method popular beyond all others. He has persisted in the face of most adverse criticism, especially by his own compatriots. He demonstrated that in fractures a cabinet maker's fit could be obtained in practically all fresh cases. His experience taught that the time limit for most cases recovery could be shortened by nearly one-half, particularly in fractures of the femur. He published a series of cases of femoral fractures where the individuals were returned to their accustomed occupations in three months where, under the closed treatment, often a year or more elapsed before complete restoration occurred. The wound repair, both the soft parts and bone was so uniformly perfect, without infection, that his procedure appeared valuable to all who were inclined to open surgery.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

Unfortunately Lane did not always deal with the details of his wonderful technique, so that the average reader of his publication failed to grasp the importance of his exacting and painstaking aseptic procedure. Even those who witnessed him at work, saw only the simplicity of his plates and the ease with which he adjusted the fractured bone ends, and fixed them. The average operator, who attempted to follow him, could not understand the importance of keeping his fingers out of the wound, he was unable to adhere strictly to the "knife and fork" method of operating as was first advocated by Koenig. It soon became manifest that the majority of wounds became infected. Most of the plates had to be removed and often the operation was a failure. Operators paused and wondered why such a simple procedure bore such defective fruit. Every surgeon was certain that his operation had been conscientiously done, that he had violated none of the fundamentals and he often began to wonder if Lane's results were as he had reported. If he took the pains to consult those who had had the opportunity of a personal observation of Lane's work, he was informed that his results were all that he had claimed for them.

It became clear that the technique of the average surgeon must be defective. Many men whose abdominal and other work was above reproach as was attested by their excellent results, failed in bone work, particularly where foreign material was implanted. The reason is evident when one considers that a steel plate is an inorganic substance, that it possesses no inherent immunizing properties. If by accident the plate or the screws used to fix it becomes contaminated, an infection is inevitable. When we consider the further fact that the tissues in the immediate vicinity of the average fracture are very sparely supplied with lymphatics and localization of infection is largely a matter of lymphatics. With a fairly abundant supply of lymphatics, a moderate amount of infection is readily disposed of. One can commit many aseptic omissions in the abdomen on account of its great lymphatic defenses, but not so at the seat of a fracture. It was the realization of this fact that induced Lane to develop his painstaking and faultless aseptic procedure. The vast majority of his plates remain in situ indefinitely. His dictum consists in insisting, that the fingers, whether gloved or not, must not come in contact with any part of the wound. The fingers must not touch that part of the instruments which enters the wound. The fingers must not touch sponge, needle or ligature that is used. The wound margins must be absolutely guarded by aseptic towels or pads overlapping their margins. The bone fragments must be adjusted by means of suitable instruments only. Gloves are easily torn and implant infection. The plates and screws must not be touched except with aseptic instruments by either nurse, assistant or operator. All ligatures must be applied and tied with forceps. If ever the term aseptic conscience was applicable, it is in this operation. To acquire such a technique is difficult and, for the average surgeon, impossible. It is clear that the implantation of metallic substances to retain fractured bone surfaces in apposition, is not an ideal operation for the average surgeon, not only must the surgeon be faultless in his aseptic work, but his assistants must be scrupulously as exact. Such team work can only be had by an operator who operates constantly with the same personnel who shares his views and are willing to observe them. The frequent change of nurses and assistants is fatal to the desired ideal.

If the use of metal plates, screws, wires, ferrules and other mechanisms are not to be popular for the rank and file of operators, we may inquire, what then? What of bone transplants? Do they offer us an assurance of better results? Theoretically, they do. They possess a high degree of vitality and an immunity to infection that has been demonstrated in the laboratory and in the living subject by many operators. The autogenous bone transplant has been used so often that it seems superfluous to urge its acceptance at this time. Its successful application does not depend on such an exact technique, a moderate amount of handling with gloved fingers is not doomed to failure. But it is of interest to relate some practical experiences and discuss the relative value of the inorganic metalic substances and the organic bone transplant. I can not better illustrate the relative merits of the two than by introducing, at this point, a practical example of a case of infected compound fracture successfully treated with a bone graft.

A. B., age 25. Baker. Was thrown from a motorcycle and sustained a compound fracture of the right tibia, which soon became infected. He was attended by his physician who affected a perfect adjustment of the fractured bones. Non-union of the bone ensued. About eight weeks later a silver wire was used to hold the fractured bones in firmer coaptation, which resulted in failure. The case came under the writers care about three months after the accident.

The bones were found to be ununited, the wound unhealed, discharging pus and the silver wire still in place. The attending physician was exceedingly anxious that an immediate operation of some kind be done, because the patient had been advised by officious friends. Therefore, the writer agreed to comply with his wish. Accordingly the wound was enlarged and thoroughly curretted. The silver wire was removed. The wound treated with carbolic acid and alcohol and a Lane plate applied. This procedure was without avail as was expected but it gave time enough for the over anxious friends to be sent home and the danger of legal proceeding averted. The Lane plate was removed after three weeks, because it had become loose. The infection still persisted, repeated attempts at disinfection were ineffectual. The period of six months had elapsed since the accident. Bone grafting was suggested to the patient, to which he promptly agreed.

Under ether anesthesia, the infected area was curetted with a sharp spoon. The wound was increased to a length of six inches. The periosteum on both sides of the tibial fragments, together with the soft parts, were separated, creating a long pocket on either side of the bone. The right twelfth rib was removed and split in its flat direction into two halves. Each half was now inserted with its endosteal side toward the denuded tibia in each previously created sub-periosteal pocket. The wound was closed except for the skin defect produced by the accident over the seat of fracture. A strip of subiodid of bismuth gauze was tucked into the remaining wound and over this the usual aseptic dressing and a posterior tin splint completed the dressing. The dressing was not disturbed for five days, on its removal, it was found that the infection had completely subsided. From this time, the repair was uninterrupted and firm osseous union was apparent in six weeks.

The important lesson was in the prompt subsidence of a persistent infection in the presence of a living autogenous bone transplant. Many similar observations, by other operators, have been made. The advantages of the bone transplant over the metallic insert, become clear by such an observation. Errors, in the aseptic technique in the use of the bone transplant, are not so promptly followed by failure of union. The latter can be handled by the gloved hand and yet the wound repairs may be ideal. Therefore the bone transplant will be the safer one and promises to be the one of choice.

While the living bone transplant has an immunity of its own, its use implied greater mechanical skill in its creation and its application than the metal plate. To see a master like Albee at work, making his inlays and dowels, suggests that he may be a trained cabinet maker. In the case of a metal inlay, the object is already prepared, while a bone implant must be prepared on the spot to fit each case. The advantages and disadvantages, in each class of fixation contrivances, are quite apparent.

However, it is my humble opinion that the living bone implanted, is destined to become the object of choice and second to it the boiled bone inlay. Their use requires special training not only in the mechanical application, but implies a thorough knowledge of the structure of bone and the ability to select the best graft and fashion it to suit each case.

Before we proceed to consider the principles that must guide us in the proper use of bone grafts, we may review for a moment, the status of our present knowledge of bone growth.

We find that the study of bone structure began with Havers in 1692. Dahamel's researches in 1739-1743 revealed the foundation of the periosteum which accords with our modern conceptions. Troja, in 1761, succeeded in producing necrosis of long bones by inserting foreign substances into the medullary canal and he observed the development of new bone between the necrossed bone and the periosteum.

In spite of a more or less voluminous literature a century passed by before any important advance was made in the study of bone. Then Ollier in 1867 published his epoch making work. His work was so well done that it remains a classic today. While his views are generally accepted, an exception has been made by more recent observers especially to his ideas on the osteogenectic functions of the periosteum.

Among the more recent observers is Barth, who in 1893, insisted that the cellular elements of bone transplants became necrotic and were replaced by new bone. In his opinion all grafts behaved in the same manner whether it was a living autograft homogenous or a heterograft or a boiled and devitalized bone.

Axhausen in 1898 was of the opinion that the periosteum was the chief osteogenetic agent. He sought to prove that the periosteum and endosteum were permanent structures, but that the bone elements underwent necrosis.

The latest observer we find in McEwen who in 1911 published his remarkable book "The Growth of Bone." He sought to show that the periosteum was only a limiting membrane and that the osteoblasts were the origin of bone growth and repair.

E. W. Hay Groves in discussing the apparently differing views of the foregoing four authors has the following to say about the role of the periosteum.

The periosteum is chiefly a limiting membrane of the bone. The dense bone can live, grow, undergo repair and produce fresh periosteum after the latter has been removed. There is a deep layer of the periosteum which is closely attached to the bone, which he termed the epiosteum which is capable of producing bone. When the periosteum is removed, without the periosteum, it can produce no new bone.

When considering the function of the bone marrow, in his opinion, he finds that the red marrow tissue, particularly its layer next to the bone endosteum has the capacity for osteogenisis. When grafted in such a manner as to allow rapid vascularization, it takes an active share in bone growth.

Ollier and MacEwen established the fact that compact bone lives and produces new bone. Barth and Axhausen showed that the majority of cells in the compact tissue of a graft die. Groves differs from the latter finding and asserts that the whole of the compact bone of a graft does not always die, that it is more than a scaffolding that acts as a support until the growth and union is complete and he believes that the esteoblast of the compact bone take an active part in the process of repair, if it has a proper blood supply, it is quite independent of periosteum both for growth and repair. McWilliams demonstrated that compact bone grafts without periosteum, nude bone, did live, yet they were not so likely to do so as when transplanted with attached periosteum, showing the importance of obtaining abundant blood supply to the epiosteum and endosteum.

McWilliams further showed that when an autograft has been placed, the immediate result is the coagulation of all cells and vessels to which the surrounding lymph is unable to percolate, the result is death of all the cells in the lacunae and the haversian canals. On the surface of the graft and in the open mouths of the haversion canals are many osteoblasts which absorb nutriment from the lymph, these cells are capable of living and proliferating. (Callic and Robertson). The osteoblasts attack the dead bone of the grafts. New blood vessels form at the mouths of the naversion canals. The rapidity with which these changes take place depends on the density of the graft. A transplant from the tibial crest which is hard undergoes the changes necessary to repair much more slowly than a cancellous bone, such as a rib.

To illustrate the length of time which may be required for repair in case of a dense hard inlay may be shown by the following case.

A railroad laborer, sustained a fracture at the junction of the middle with the lower third of the right tibia. Nearly eighteen months later he came under the care of the writer with a diagnosis of non-union. A skiagram revealed an unreduced fracture with an overlapping of an inch and a half and, of course, a non-union.

Under ether anesthesia, an incision six inches in length revealed the seat of fracture. The fractured ends of the bones, which were very hard, were removed with a Gigli saw. The medullary canals were nearly obliterated with new hard bone. The bone ends were brought into place by means of Lanes long forceps and a Murphy skid. It was then decided to make use of an Albee bone inlay. Accordingly, with a twin saw, a graft four inches long was made. The graft was so fashioned that its total length included both broken ends of the tibia. The graft, of course, being in two pieces. The lower fragment of the graft was one and one-half inches long and the upper was two and one-half inches long. The bone was very tough and hard and so thick that the saw was not large enough to penetrate to the medullary canal which was very small from new growth of bone. It became necessary to separate the grafts, from their groove with a chisel, leaving hard smooth bone on the lower side of the grafts, and, of course, no enosteum. These grafts were then reversed so that the lower or shorter graft rested in the upper end of the groove and the longer graft in the lower end of the groove and extending upward bridging the broken tibia. The inlays were fastened with kangaroo tendon according to Albee. The immediate wound repair was ideal. Bone union, however, was retarded for eight months, which was unaccountable at that time. Several experiences with similar bone inlays where the under side of the inlay did contain medullary structure, and, of course, endosteum repair was complete in six weeks. One experience with a tibia fracture where a rib was used as an inlay, firm union could be made out in four weeks. Then came another ununited and unreduced tibial fracture of about one year's duration where a hard inlay was used in accordance with the above technique in which the immediate wound repair was perpriman. In six weeks the inlay had become loose and it was removed. It had been crowded out of its bed, the margins of the inlay gutter were lined with new growth. The surface of the graft had become roughened by attempt at absorption. At many points there was vascularization, but apparently not enough to maintain vitality and the graft was finally cast off. At the fractured bone ends there was an abundance of new bone that finally became firm.

These examples show that large and dense grafts are not reliable, they are replaced slowly and may be entirely cast off as foreign material. The danger of failure of a dense transplant becomes greater when the bed to which it is transplanted has a defective blood supply. Either the surface to which the graft is fixed or the graft itself must have a concellous structure. The best possible conditions exist when both bed and graft are abundantly vascularized. We believe that the important elements in bone repair are the osteoblasts. They attack the inlay, cause its absorption and replace it and they are the origin of new bone, and in order to perform their function efficiently, they must have a good blood supply.

The writer has had a few cases where bone fragments, particularly recent fracture, were easily maintained in position after reposition had been accomplished by open operation, that the bone inlay required no fixation, union was perfect.

However, the bone transplant must usually be securely fastened to its bed which has been done by kangaroo tendons, metal screws and nails. Boiled bone, screws and nails and ferrules.

The writer some twenty years ago, employed decalcified bone ferrules on the shafts of long bones as recommended by Nicholas Senn, and later decalcified bone plates. The ferrules were given up because it was difficult and often impossible to make a fit sufficiently firm to retain the broken bone ends in accurate apposition. The decalcified plates were too elastic and did not hold screws well. Boiled bone inlays appear in some cases to have a place and deserve a more extended trial. Silver plates possessed no advantage over steel, on the contrary, they were not as good because they were often bent and permitted angulation.

Our experience has lead us to employ chiefly living bone inlays or Harry Sherman's vanadium steel Lane plates. We have taken out very few of our plates and the few that have necessitated removal have been in regions where they were covered by a limited amount of soft tissues, i. e., on the tibia, where traumatisms caused contusions and local irritation. In several instances the plates were removed a year or two later. The bones, in each instance, were firmly united. In three cases of fractures of the femur, the muscular contraction caused angulation, bending the plates or pulling out the screws. There was no infection in any of these cases but the plates were removed because one or both ends of the plates had become loose. In one of these cases angulation ensued in spite of two plates. The fracture had existed six months, there was an overlapping of three inches. In our endeavor to give the greatest possible length to the femur, too small an amount of bone had been removed from the broken ends. The muscular tendon was too great to be overcome, consequently, there was bowing of the femur. In none of our plate cases did we omit the external splints. The usual dressing consisted of plaster of Paris and to it we sometimes added extension and counter extension to overcome muscular rigidity.

Since we have learned to appreciate the advisability of avoiding hard dense grafts when possible and have found the advantage of transplant which contains cancellous structures and retained at least the deeper periosteal layer, the epiosteum. And, further, if the transplant has attached to it the endosteum, we have a graft that contains all the elements that insure its rapid growth. We must not assume, however, that a dense bone transplant is to be altogether avoided. But if it is true as Axhausen and others insist, that the structure of all grafts is gradually displaced by new bone elements, we can readily understand that the process must be a much longer one.

At the present time the writer is inclined to favor living bone transplants, consisting of inlays and intra medullary pegs or bolts. With the advent of the X-ray, both the profession and the laity demand cabinet makers fits. Not alone a good functional result as in times gone by but accurate adjustment. The attitude of criticism assumed by members of our profession, one towards the other, demands this. Therefore operative treatment will be more frequent. Special training for this work is imperative. The employment of the living bone transplant will test the best skill. The developments in bone surgery during the last decade has shown great advances and the future will elevate this branch of our art as one of the most important, if not most exacting in surgery.

### Discussion.

**Dr. A. J. Brown, Omaha.**—Dr. Jonas' paper is so extremely important and yet so thoroughly covers the subject, there is very little to be said except to emphasize certain points he made, which I wish to second most heartily.

The first is the problem of antiseptics in all bone work. Sometimes, especially working in fresh cultures, each man is going to get infection if he does enough of the work. When he does get infection, he is going to be up against one of the most disheartening things imaginable. Consequently it is absolutely essential to have a trained staff, from nurse to operator, to work. We all know Dr. Lane's results in his own hospital. I have seen some of Dr. Lane's work with a staff he did not know. He expressed before he started in with the work the difficulty which he would have to maintain an aseptic technique, and although most of the results were brilliant, some were not.

We have heard a great deal of the controversy between the use of the Lane plate on the one hand and that of the bone graft on the other. The bone graft, as Dr. Jonas has said, introduces a new element. It introduces a fresh element of fresh bone into an area in which the bone has become eburnated in an old fracture. It gives new osteogenisis, and through the periosteum it gives a living structure supplied by open blood vessels. The bone graft, in a culture ununited, by the very technique of the operation opens up the medullary canal. As in the case Dr. Jonas recited, this canal in these old cases is filled up with eburnated bone. The ends are sealed over, and the endosteum can no longer work. So the operation opens this up and allows the canal to stimulate the endosteum and start new bone.

On the other hand, in a fresh fracture the mechanical condition of the fracture is difficult to hold in alignment. In those cases it is extremely difficult to plant your bone graft, and to get a bone graft of sufficient strength so that it is mechanically possible to hold the fragments in apposition. In that type of case it is necessary to have a steel, or some metallic substance, to hold the bones in apposition. That is what you do the operation for, and consequently the bone graft in a case of that kind will not often work.

There is one point in the technique of using a Lane plate. I agree perfectly with Dr. Jonas in the steel plate of Sherman, and also his self-adapting machine screw. It holds better than the machinist's or carpenter's screw. In those cases it is essential to use a plate a little bit larger than you think is necessary. The smaller plate will bend, and in many instances will break, but a large plate gives you extra support, and then in addition, there comes the proposition of great care in replacing the extremity in normal position after the operation, and holding it there with mechanical external appliances, just as you do for a fresh fracture. (Applause).

**Dr. A. F. Jonas,** closing, said: Somebody asked the question, "do you ever have infections?" We do. I believe Dr. Lane does sometimes.

I wish to relate an experience we had with an infected fractured femur which we plated. He had a fracture of the femur about three months old when I saw it. When we saw it it was like this: (Illustrates on blackboard). The X-ray did not show the callus. A skiagram is very much like a spiritualistic seance: Everybody has made up his mind what he wants to see, and he sees it. The same object is recognized by different persons from little Mary to some one's grandmother! We were working in a hospital where we were not accustomed to work very much. The case was operated-plated. In ten days there was a quantity of fetid pus like the kind you get from an appendix. We did not know whether or not to take that plate out. It looked like the bone had become recrossed. We decided to let it alone. In two months we lifted the limb, both fragments moved at the same time. We found the necrosis had not involved the entire thickness of the bone and in spite of the severe infection, we had perfect union. It is not a good plan to remove a Lane plate immediately when you have an infection. I throw this out as a practical hint, because I hope it may be of value to us in a similar experience. We were working in a hospital where the nurses are economical, and they saved short ends of catgut left over from operations. I remembered we had been handed short ends of cat gut. The patient got well finally and we had no quarrel with the hospital, but you will find the saving of some things in the way of surgical material is bad practice. Save on something else—not on the material you put in the wound.

## Complemental Jejunostomy.*

A. I. MacKinnon, M. D., Lincoln.

Postoperative ileus is now and always has been one of the knotty problems confronting the abdominal surgeon. For its solution many lines of treatment pre and postoperative have been recommended. And the end is not yet.

A good many years ago, in fact more than twenty, I had a visit with an active member of this society who at that time was giving special attention to diseases of women. He had been abroad for study, was well equipped to practice medicine and was ambitious to be a surgeon gynecologist. During our conversation he related his experience with his first, and I might also add his only, abdominal operation. I recall very clearly the language used—it was as follows: "The antiseptic details of preparing patient were perfect and the technic of the operation was perfect, but the patient died in three or four days from 'peritonitis.'" He was discouraged and shortly afterward laid aside the scalpel for the pen and is now editor of one of the best medical journals on earth.

I have thought many times since, and still think, that the peritoneum has been blamed for many deaths unjustly. The peritoneum is the best friend the abdominal surgeon has. As far as I have been able to learn, the secretion of the peritoneum is a bland and soothing lymph and even when invaded by bacteria it pours out its secretion loaded with immunizing products to help antagonize and localize the enemy. I can conceive of no condition in which an inflamed peritoneum—or peritonitis—could cause death per se.

I have for many years advocated the elimination of the term peritonitis as a surgical entity, and I feel that the time is right for placing the blame for our postoperative complications where they rightfully belong—the intestines—and the term postoperative ileus, which may be toxic or mechanical, as the real source of our mortality following abdominal surgery.

In my own experience I have seen but few abdominal cases die in whom the bowels could be kept open, and the cases that died were ones with virulent infections and the peritoneum had nothing to do with it. In fact my first appendicitis case was a ruptured appendix with diffuse peritonitis. He was purged before and after operation and got well—the peritonitis did not do him any harm.

Twelve or fifteen years ago I gave as my opinion in a paper before this society that it was what was in the bowels—and not in the peritoneal cavity—that caused disaster and, I am stronger in the faith now than I was at that time. To illustrate: Two or three days after operation for ruptured appendix with peritonitis the patient still vomiting, abdomen distended, inability to get bowels moved and all signs of impending dissolution. Open the jejunum and empty the intestinal canal and the change is so striking it convinces a doubter.

Even up to a few years ago it seemed to be the ambition of surgeons to devise some new method of posturing patient, as sitting up, prone, elevating foot of bed, or a new location or material to drain it. I am firmly convinced that much of the peritoneal tinkering put an added load on the patient.

To discuss whether the ileus is due to the peritonitis or whether it is due to toxines absorbed from the infecting focus and paralyzing the nerve supply of the intestines would lead us too far afield. I am inclined to favor the latter theory and I am a firm believer in this fact, that if you break the circuit as it were and drain the bowel successfully, you may neglect the peritoneal involvement.

That postoperative ileus is a vital surgical question may be verified by the review of review of recent surgical literature. A recent presidential address before the American Surgical Society discussed postoperative ileus, described the various methods of enterostomy and in his conclusions he warned us especially not to make the opening in the jejunum high up on account of the danger of permanent fistula and starvation. The president of the Missouri Valley Society two years ago discussed postoperative ileus in his address. Dowd of New York says "nothing in surgery is more dramatic than the improvement which comes from a fortunate enterostomy." This shows the trend of modern surgery is to drain the intestines instead of the peritoneal cavity. Enterostomy for ileus is not new. The methods of Monyhan, Mayo Robson, von Mikulicz, Witzel and Naydl for enterostomies were so disagreeable to the patient that they have justly fallen into disuse, the results were mere chance.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

The results of high jejunostomy for mechanical and postoperative obstructions have been so dramatic that I hesitate to attribute its success to chance, but feel that the enterostomy has been done at the proper point to relieve the condition both mechanically and pathologically.

It was but a short step from doing the jejunostomy postoperative to relieve an obstruction to doing it at the time of operating and thus prevent the obstruction. This operation I called a Complemental Jejunostomy. I am not recommending it as a terminal to every abdominal operation, but in a selective few in whom we have good reason to fear postoperative intestinal trouble I feel that it is the best thing that I know of at the present time.

V. V. G., Havelock, Neb., had a personal history of stomach trouble for the past ten years. In 1911 he was operated on and had his appendix removed, which relieved him for a short time and the stomach trouble recurred. In February, 1916, he had a gastro-enterostomy performed giving relief for about six months when the old trouble recurred again. In June, 1917, an exploratory operation was performed but nothing was found to account for the stomach symptoms. On September 19, 1917, he went to a hospital under the care of a stomach specialist but did not get relief.

I saw him October 15, 1917. He was much emaciated, had severe abdominal pains necessitating morphine for temporary relief. I made a diagnosis of ulcer of the stomach, most likely in the region of the gastro-enterostomy opening, and advised an operation separating the jejunum from the stomach and removing the ulcer if thought advisable. I operated on him at St. Elizabeth hospital October 16, 1917, and on opening the abdomen I found no adhesions from his former operations, the pylorous was open, the stomach was very much contracted and the jejunum very much dilated. On palpating the stomach a large ulcer was found on the posterior wall, and the posterior wall of the stomach was firmly attached to the pancreas on the back. I was afraid to separate the stomach on account of the danger of perforating the ulcer. An incision was made around the gastro-enterostomy opening, the jejunum separated from the stomach and the opening of the stomach sewed up—this was very difficult on account of not being able to displace the stomach into the wound, it had to be sewed up where it was, down in the depths. The opening in the jejunum was sewed up next.

The operation took more time than an ordinary case would, and on account of the patient's condition in general, I felt there was a great danger of post-operative ileus and decided that a jejunostomy performed at the time would forestall the possibility of an ileus, and I. accordingly performed a jejunostomy about six inches below the stomach and brought the tube out through a stab wound under the left ribs. The recovery of the patient was prompt and uneventful. One noticeable feature of his convalescence was the fact that he did not complain of any gas-pains, and after each of his former operations his suffering from gas-pains was very distressing and lasted practically a week.

Mrs. S., of Exeter, Neb., had an abdominal operation performed six or seven years ago. Four or five years later she had another for the cure of a large ventral hernia, and the hernia recurred. I first saw her November 17, 1917, and found a large fat woman with an enormous ventral hernia, extending from the umbilicus to the symphisis pubis. For several years she has had attacks of obstruction of the bowels and the last six months the attacks were more frequent and more difficult to relieve.

The operation: An incision was made into the hernial sac, the intestines were adherent everywhere, necessitating a long and tedious dissection freeing the sac, the intestines were found adherent to the bladder. After freeing all adhesions I explored the abdomen and found a large tumor mass in the transverse colon near the splenic flexure. I resected the transverse colon six or eight inches including the tumor mass and anastomosed the proximal end to the sigmoid and completed the operation by putting the tube in the jejunum about six inches from its origin and brought the tube out through a stab wound below the left ribs. The patient left the hospital in two weeks.

Mrs. G. referred by Dr. Slattery Nov. 27, 1917. Twenty-four hours before she entered the hospital she injected turpentine into the uterus with a rubberball ear syringe. This was easily done by her on account of laceration of the perineum and the cervix could be protruded to the outside. Her abdomen was greatly distended, pulse small and rapid and her general condition very serious. On opening the abdomen the pelvis and lower abdomen were filled with a dirty fluid and a strong odor of turpentine. The small intestines were adhered and covered with a gray exudate and it was impossible to separate the intestines. The drain was put in the pelvis, the tube put into the jejunum and brought out through a stab wound. Her recovery was uneventful.

Mr. C., of Franklin, Neb., was seen at 2 a. m., Dec. 24, 1917, at his home. About 1 a. m. Dec. 23 he was seized with an agonizing pain in the abdomen and had to have large doses of morphine to relieve the pain. On examination, the abdominal muscles were board like, the pulse small and rapid. The diagnosis of acute perforating ulcer of the stomach was made and an operation was performed on the kitchen table with a coal-oil lamp for light. An incision was made over the stomach, the perforation was found at the pylorous and sewed up with a purse string suture. A tube was introduced into the jejunum and brought out through a stab wound in the left side, a large drainage tube was introduced into the pelvis through an incision above Poupart's ligament, another drainage tube was introduced under the liver —Morrison's pouch— and the abdominal incision closed. He made an uneventful recovery.

### Discussion.

In regard to the point brought up as to whether it is the peritonitis or the obstruction of the bowels that causes the fatality. The point that appeals to me is, that if you open the bowels and get free drainage the patient will ordinarily get well and you may neglect the peritonitis—this is supported by the observation of Dr. Roeder.

In advocating an enterostomy high up in the jejunum there is a factor that aids in emptying the intestine—and one to which we have given little attention—and that is a reverse peristalsis. When we have increased intra-abdominal tension we get free drainage. This is not true in enterostomies lower down in the small intestines, because here we have distended intestines on both sides of the opening and the segment of gut drained is kinked by the pressure on either side. In a high jejunostomy there is positive pressure on the intestinal side and negative pressure on the stomach side, so that when the segment drains it practically unwinds itself, and the action is continuous.

One or two points that I should like to emphasize. Never give a general anesthetic in doing a jejunostomy for postoperative obstruction . Any nurse will tell you that peristalsis is at a pretty low ebb for twenty-four hours following an abdominal section under a general anesthetic.

I wish to thank the gentlemen for their discussion and particularly Dr. Summers for his very flattering comments.

**C. A. Roeder, Omaha.**—This paper presented a subject of great interest to me as I have had considerable experience with peritonitis and intestinal obstruction. I first read of jejunostomy for drainage over two years ago (Bonney, Brit. Med. Journal, Apr. 22, 1916) and an Australian surgeon advocated it ten years ago. I have never seen a case of peritonitis prove fatal which originated from an appendix and in which a fecal fistula presented itself soon after the operation. The fistula drained the bowel which was the deciding factor. Do patients die more from absorption from the peritoneum or from absorption from the bowel in cases of peritonitis? Autopsies performed immediately after death from peritonitis with ten or more clamps placed immediately on the small bowel to retain the fluids originally contained in various segments, show a marked accumulation of intestional contents in the upper ileum and jejunum. This has not been emphasized enough. The upper part of the small bowel secretes more fluids than any other portion of the gut, increased greatly by various physics given to move the contents onward and with this marked increase of fluids we have the bowel greatly distended which causes a pressure necrosis of the mucosa from which the toxic contents are absorbed into the circulation manifested first by an increased pulse rate, later by the death of the patient. Ileostomy on the lower ileum for peritonitis or obstruction has frequently been done and rarely on the upper ileum, for a long time past, but the value of the latter method has not been appreciated until lately, as evidenced by the few papers appearing on the subject. When a patient's bowels move after an attack of peritonitis we consider it a favorable sign and generally the case recovers. Why not drain the bowel as well as the peritoneum? It's impossible to drain the whole cavity with multiple tubes let alone one and naturally large quantities of pus remain even in cases recovering. This brings up the question as to whether or not the fatal cases die of absorption from the peritoneum or the bowel? This paper was very interesting and the procedure advocated an advance in the surgical treatment of peritonitis and obstruction.

**Dr. J. E. Summers, Omaha.**—When Dr. MacKinnon read his paper at Lincoln I was very much interested, because I had talked with him on the subject and had had some personal experiences. Although he is not the originator of this operation—others have done it before him—still I do not think he knew of the other men's work, which was not as well done as his. They made an open enterostomy instead of doing the operation as Dr. MacKinnon does it, which is very much better. It will do what the doctor says it will do. There is no other man in the United States who has had the experience he has had in this particular technique for the relief of postoperative ileus. He has had twenty cases or more.

At the last meeting of the American Surgical Association at Boston, one of the speakers advocated that the bowel should be opened as low down as possible above the obstruction in postoperative ileus, and not high up. I had the pleasure of trying to correct him because of the principle of Dr. MacKinnon's work and my own. It is the best thing that has come out of Nebraska in a good many years. (Applause).

---

## Results of Tonsillectomy.*

Louis B. Bushman, M. D., Omaha.

Although the knowledge has existed for a long time that areas of focal infection and disease have been the cause of systemic disturbances, it has been but comparatively recent that particular stress has been laid upon the subject. Through the studies of Rosenow, Billings and others, it has been so conclusively shown that a pocket of pus, wherever it may be located, may assume a very important role in the causation of many organic and functional disturbances, and today whenever the internist or surgeon is consulted, before diagnosing the case, he first seeks for some focus of infection.

The tonsil, due to its location, susceptibility to disease, and above all, to the duty it performs in absorption through its connecting lymphatics, has so often been found the actual focus for systemic disease, that a thorough examination of this part is absolutely essential before considering a physical examination well done.

### Tonsil Infection.

Normally a free drainage prevails throughout the tonsil as long as there is no obstruction to the crypts, but whenever through inflammation or disease there is a resulting obstruction producing a closed sac, then systemic absorption takes place and various body structures may be attacked. It has been my experience, that although a diseased tonsil is often the cause of disorder, the peritonsillar space perhaps plays a more important part in the production of disease. We so often find the plicatonsillaris adherent to the tonsil, especially to the extent of covering one or more crypts, and by a seepage of pus into the peritonsillar space we have a closed pocket, from which there is no escape of its contents except through the lymphatics.

### Local Disease.

An acute or chronic tonsillar disease causes but little worry, as the symptoms are not very severe, unless it be the pain incident to the swelling, difficulty in deglutition and perhaps the bad taste in the mouth due to debris escaping from the plugged up crypts. The removal of the tonsils under such conditions removes the mechanical obstruction, gets rid of the diseased tissue and of course results in the prevention of systemic absorption.

### General or Systemic Infection.

As I have previously stated, whenever you find a closed pus sac, there you have a chance for systemic infection. It matters not if its location be in the tonsil itself or in the peritonsillar space, the danger is there and must receive the most serious consideration in its relation to near or remote pathology. And if we can honestly accuse this disease producer as being even in the slightest manner the real culprit, then it is our duty to thoroughly remove it. We know that the results of tonsillectomy are sometimes so marvelous and often so rapid, that we can hardly be blamed for being enthusiastic when referring to the subject.

### Class of Cases Improved.

1. Functional Disturbances; 2, Organic Disease; 3, Borderline Cases.

### Functional.

Whenever we find children suffering from nervous irritability, and in its extreme form, chorea, we immediately seek a toxic cause. Often we find this in the tonsil, and after tonsillectomy we have experienced most favorable results. I have in mind at least six cases of chorea, varying from five to twenty years of age, who were referred to me for suitable treatment. These patients showed all the classical symptoms. After the operation perfect control was kept over them, no medicine whatever was administered and I am happy to say all were cured.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

Rheumatism both in slight and severe degrees, has responded beautifully to tonsillectomy when the tonsil was the proven seat of trouble. However, when rheumatism has existed for years and has left its permanent mark in one or more parts of the body, one cannot promise too much and often not more than the eradication of the cause, allowing nature a future free hand in producing as much improvement as possible. Many authorities speak of the benefits derived from tonsillectomy in goitre and although the connection between the thyroid and diseased tonsils has been demonstrated, I have never seen a case where the growth had diminished or disappeared. I do not doubt, however, but that others have had some success, the removal of the tonsils at least having eliminated a diseased area.

### Organic.

When one deals with organic lesions, especially in the heart and kidney, he must be exceedingly careful in making promises. If these organs have been subject to a chronic siege of infection, and tissue destruction or change has occurred, too much cannot be expected. And still it is surprising to follow some of the cases after tonsillectomy, presuming of course that the tonsils are diseased and diagnosed as the cause. The heart or kidney is not restored to normal, but if the organic disease has not made too great an inroad upon the structure, the patient improves greatly in health, and often a comparatively happy result in observed.

### Borderline.

Of all cases, those which I designate as borderline, those which have caused all sorts of functional symptoms and have just about arrived at that stage where organic changes are taking place, these are the ones that demand the most serious attention from both internist and surgeon. No doubt all of you have in mind one or more patients who, if they had had proper earlier attention would not have come to you later with a destructive heart lesion or a kidney destroyed beyond repair. But it is of paramount importance that every physician, when he finds a toxic focus in the body, should anticipate what danger for systemic involvement lurks in such a spot and he must seek its thorough elimination before feeling that he has acted properly. Many of these heart and kidney conditions are relieved permanently by proper and immediate attention, whereas undue delay, may spell an irremediable organic lesion.

In conclusion the one thought to carry away is, that whenever a possible focus of infection is found, it should have immediate elimination. Hesitation often proves fatal, and, if, as in the case of diseased tonsils, one should be somewhat uncertain as to the actual relation between the focus and the systemic condition complained of, it is always beneficial to the body to have the focus removed.

### Discussion.

Dr. L. B. Bushman, Omaha, closed the discussion of his paper, as follows:

I wish to thank you gentlemen for the fine things you have said.

The question came up as to the function of the tonsil. That has been in my mind for a long time. I have tried to find out from somebody what it might be. I consulted Dr. Foote of the Creighton Medical College, whom no doubt most of you know as being a rather well informed pathologist. he has made a great study in histology as well. He speaks of the tonsil as a gland that has no function in the human being. He cited as an example the reptile. He says the reptile has a very large tonsil which in that reptile has a function of being a secreting gland. In the human being the tonsil has lost that function. It originally had the secreting ducts, but they have disappeared, and in their place there has been lymphoid tissue formed, and of course the lymphatic vessels that drain it. So far as the function of the tonsils in the human being is concerned, it is a question whether or not it is not extinct. It is a kind of sieve to do its work to kill any pathogenic organism that may get into it.

The question came up as to the good results one sees in children. I think in the vast majority of cases where you find tonsils in children, they are not what you might call diseased. We find a great many children who have an actual disease present, but when we find a big hypertrophied tonsil, it means in almost 100 per cent of the cases they have enlarged adenoids as well and we have a condition of simply mechanical obstruction. The tonsil itself I think has lost that. The connective tissue is so predominant that what function there is in the tonsil has been destroyed by this tissue, and I do not think that tonsil is dangerous—I mean when it comes to a question of disease. The good you find in removing tonsils and adenoids in children is due to the removal of the mechanical obstruction, and the greatest good you get is not so much from the removal of the tonsil as from the adenoids. We speak about these youngsters being puny and mentally defective in a way. I think it is due to defective breathing. As you know, in the breathing apparatus, so far as the nose is concerned, there are three functions. One is to cleanse the air, another to moisten that air by the natural secretions of the nose, and the third is that of warming the air. Those are three important functions. If that child breathes through the mouth, there is not a single function performed in making that air fit to enter the lungs—no heating, no moistening, and no cleansing. I think it is that bad air that is taken into that child's lungs that is the cause of most of his trouble. It is simply a removal of the mechanical obstruction in the child when you remove these tonsils. There are some cases where an actual disease is present, and of course they call for immediate tonsillectomy.

I think Dr. Rayner asked the question as to the prevention of disease in the tonsils of children, and spoke of a mother who came to him for advice as to what to do; that is, presuming that the throat is normal and healthy, how to prevent tonsil trouble.

It has been not so much my experience, but from what I have heard others say, that it is not well to do too much—to overdo. I think that is the hardest thing for all of us to overcome. That is our great tendency. I just wish to quote Dr. Langfeldt, who at the present time is a pathologist, and takes care of all these diphtheria cases. Years ago when his office was near ours, he would come into the office and ask us to spray his nose and throat. He said he could feel when the diphtheria infection was in his nose, and all he ever asked was that we use a simple oil spray. I think that is all that is necessary for a child. If he has any tendency to a little soreness, just use a little oil spray. It acts as a covering to the mucous membrane and gives it a chance to recuperate, and the congestion is remedied.

A diseased tonsil does not come all of a sudden. It does not mean that the day you have seen that tonsil is the time that disease was taking place. It means it has required possibly several attacks of sore throat that have not been severe enough to warrant a physician's attention; but those sudden sore throats frequently by their continuance cause a condition that will make that tonsil a suitable place for real disease. I think that's the way it happens.

I want to say a word in regard to Dr. Lemere's paper. I think it is brought out in good time. I, myself, have never attempted that operation under those conditions; and I should like to ask Dr. Lemere what he considers the selective cases?

---

## Infantile Scurvy.*

W. O. Colburn, Lincoln, Neb.

Infantile Scurvy is a constitutional disease closely associated with nutrition, characterized by a tendency to hemorrhage under the periosteum of the bones, into the gums, into the skin, and into the various mucous membranes. Extreme hyperesthesia, and often pseudoparalysis of the lower extremities are present. Anemia and cachexia are secondary manifestations. This disease was described as early as 1651 by Glisson.

### Etiology.

Scurvy is not a disease of the city, nor is it a condition prevailing in the poorer, crowded districts, rather to the contrary, this ailment occurs in the best surroundings, country as well as city. It is exclusively a disease of infancy. Four-fifths of the cases occur between the ages of six and fifteen months. A few cases have been recorded under one month of age, and Kerley states he has had only one case over 18 months, and it was four years of age. The nutritional disturbance is more common in the artificially fed, but is occasionally seen in the breastfed. It occurs most frequently in infants fed a long time on proprietary foods prepared without milk, and next, milk prepared with heat. Dilute cows milk (raw) is an important etiological factor in causing scurvy. A theory of intestinal intoxication has been propounded, the diet is faulty in not being capable of inhibiting the elaboration of the poison in the intestines.

Funk believes there exists in food certain substances which play an important role in the physiology and pathology which he calls "vitamins." He believes that these substances are essential to proper metabolism and nutrition, and that their absence causes certain diseases, such as scurvy, beriberi, pellagra and rickets. It has been proven by animal experimentation that scurvy is not due to starvation or inanition, but to the lack of some essential food element.

### Lesions.

The most striking lesion is hemorrhage, and the subperiosteal hemorrhage is the most constant, and may occur most anywhere in the body, but chiefly in the long bones of the lower extremities. Extravasations of blood may also be found between muscles and in the cellular tissue about the joints. Hemorrhage into the bone marrow, under the skin, under membranes lining serous cavities, or from mucous surfaces, all suggest a hemorrhagic disease.

### Symptoms.

A period of indisposition, fretfulness, pallor, and failing nutrition proceeds the local symptoms. Pain on manipulation of the limbs, cries when the napkin is changed, or when bathed or dressed, are usually the first symptoms noticed. This increases in severity until the infant will cry at the approach of any one. Swelling occurs about the knees and ankles sometimes to the extent of being mistaken for some surgical joint involvement. The posture becomes characteristic, there is a semiflexion of thighs and legs, and an outward rotation of the hip, a so-called pseudoparalysis, often mistaken for a true paralysis. The gums take on a deep purplish color, swollen, particularly about the upper central incisors. They bleed from the slightest irritation. The infant loses color, weight, and appetite. By close observance it has been noted that the child fails to grow in length, a fact which is not observed in the simply disturbances of nutrition. Hematuria is a fairly constant symptom, though frequently to a very slight degree. Anemia and cachexia becomes marked in advanced cases, the blood findings being that of a secondary anemia.

---

*Read at Northwestern Nebraska Medical Society at Long Pine, Neb., August 6, 1918.

Hess in a recent paper speaks of a subacute infantile scurvy and a latent form of scurvy. The subacute type is characterized by incompletely developed symptoms of the classic type and the diagnosis is usually made from the one fact, that these cases immediately get well on the addition of orange juice to their diet.

The latent form is a state of malnutrition which develops slowly as the result of a negative balance of "vitamins." It can rarely be definitely diagnosed, except by the sharp recession of symptoms, stationary weight, pallor, poor appetite, etc.—following the administration of an antiscorbutic.

Roentgenograms show that the heart; especially the right heart, is frequently enlarged, and that there is a broadening of the shadow at the base of the heart, at the site of the great vessels. Furthermore, the disorder is associated frequently, even in the mild forms with a cardiorespiratory disturbance characterized by a very rapid pulse, and respirations which may rise to 60 a minute. Both of these signs disappear rapidly when orange juice is given. This cardiorespiratory syndrome is due to an involvement of the nerves. The following case is illustrative of the subacute type.

Case History No. 344. H. R. Male. Parents are of the richer class. Birth weight 6 lbs., 2 oz. Mother had pulmonary tuberculosis in recent years and for that reason did not nurse the baby. The baby did well on modified milk up to the fourth month, then baby cried fully half of the time, did not sleep well, and gained steadily but slowly in weight, about 3 to 4 oz. per week. The milk was boiled. The bowel movements were perfect, no distention, and the baby was taking its full caloric requirements, and even more had been given, but with no increase in the gain. Orange juice had been given in very small amounts, but was increased and symptoms disappeared, and the gains became more marked. At the sixth month, vegetables were added to the diet and the weight curve, showed a rapid ascent, until at the age of 7½ months, the infant almost reached standard weight.

Illustrating the latent type:

Case No. 919. Baby C. Male. Parents of moderate wealth, living in a small country town. Mother nursed baby up to the twelfth week. Baby much under nourished. Had been on modified milk for ten days previous to the time the case was referred to me. Birth weight 10¾ lbs. Present weight 10¼ lbs. After three weeks of using various modified milk formulae, the baby did well on Keller's malt soup. The baby showed a good weight curve, but had considerable crying and pain on handling. Pulse 120 to 130. Respiration 40 to 50. Temperature 100 to 100½ evenings (cardio respiratory syndrome). The addition of orange juice to the diet, resulted in a better natured baby, and still greater gains in weight.

### Treatment.

Orange juice is a specific, give one ounce a day. Most fruit juices are antiscorbutic. Meat Juice and potato water may also be found useful. The response to treatment is rapid. Within three or four days the severe cases are very noticeably better, and in ten days are practically well.

The following case is illustrative of the severe or classic type, and shows the quick response to treatment:

Case history No. 1508. Baby M. Female. Age 9 months. Parents live on a farm near a small town. Case referred to me by Dr. Crutcher, of the State Orthopedic Hospital. Birth weight 7¼ lb. The past six weeks the baby has been steadily getting more fretful, until great fear and apprehension was manifested by the approach of any one to the bed or crib in which the baby was lying. Left limb shiny and semiflexed on body. Gums purplish and spongy, showing recent trauma where a physician had lanced the gums. A typical pseudoparalysis of the lower extremities existed. Pallor, cachexia and anemia were also present.

Feeding formula: Rice water 4 oz. Milk 4 oz. Maltine, 1 teaspoonful. Eskays food 2 teaspoonsful, and 20 grains Sod. Bicarb., all boiled together.

Five ounces of above mixture was fed every three hours.

### Treatment.

Orange juice 1 oz. a day and raw milk was instituted. Parents reported in three days that baby did not cry on approaching her and less on handling.

In fifteen days the baby was brought to me entirely well and happy.

### Conclusions.

1. Infantile Scurvy is a disease found in the country as well as in the city, and often overlooked by the practitioner.

2. Subacute and latent types are quite common and the addition of orange juice to the dietary of a baby that is restless, and not gaining in weight, may bring about a sudden, wonderful improvement in the baby.

3. If Scurvy is recognized, the treatment is simple. Orange juice is a specific, and the results are apparent in a very few days.

---

## Sidelights on Carcinoma.*

O. C. Morrison, M. S., M. D., Carroll, Iowa.

In the discussion of this subject, one does not wish to announce any new theories for the etiology of carcinoma. The observations herein enumerated have come to mind so often from different directions and all seem to point in one general direction so distinctly that the topic of "sidelights" readily found expression in the discussion of this much talked of subject.

To learn the character of such cells as carcinoma, one is led to study the metabolism of the cells in areas where the disease is wont to appear. It is interesting to know that upon any epithelial surface where the normal epithelial cells will reproduce a normal tissue year after year, that providing an environment conducive to the proliferation of ca cells is supra-implanted; that these once normal cells will take on a new order of growth after many weeks or years of the influence of this new environment. It is so noticeably true that we will go over the developments as they actually happen so far as they appear to one's reason.

The words "embryonic and neoplastic cells" appear in the many articles without clear definition. To me there is a sharp distinction. The embryonic cell is one having all the traits and habits of a normal cell, though young. The neoplastic cell possesses proliferation qualities that are anything but normal. When a cell is neoplastic it has changed its nutritional habits from a normal cell and has adopted new habits of living.

We all know these cells which have neoplastic tendencies get their nutrition from somewhere. They are canalized by poorly formed vessels and therefore we reason they acquire their food from an origin akin to normal cells. Whether or not the cell is changed by the environment and food in this locality or whether the changed characteristics of the cell calls for a change of food material, different from normal cells, is the question. Now we can get some light upon which it is by studying the many and diversified etiologies of the new cells. We are well acquainted with the following causes or environments conducive to cell change of the cancer type.

1. Nicotine type of smokers.

2. Heat type of Cashmir Highlanders, due to Kangri Basket.

3. Scrotal type of chimney sweepers of England.

4. Chemical type of coal-tar workers.

5. Radio-active chemical substances, as radium, X-ray type.

6. Experimental parasitic type, as reported by Febiger of Copenhagen.

7. Influence of old ulcer areas of the stomach.

8. Predominence, old age.

9. Its slow prodromal period.

10. Its non-congenital tendency.

11. Influence of bacteria within the Antrum of Hymore.

When we study the etiology of say, cancer of the stomach, supra-implanted upon an ulcer base or second, cancer of maxillary antrum or sinus or the irritation types as that of X-ray, we find in the beginning a perfectly healthy skin or mucosa. If the environment of these cells is not changed we get the continuity of their normal growth. But should the streptococcus set up an ulcer of the stomach (Rosenow) which is carried over to the chronic types (70 percent of Ca of the stomach had its base an old ulcer, Mayo) or if infection stay chronically in the Maxillary Sinus, or if the normal skin is constantly subjected to the irritation of the Gamma Rays of the Roentgen tube, we readily observe that the environment of these cells is changed and a new order of affairs must be carried out in this community. The study of cell rearrangement will show marked re-adjustment to meet new conditions and we reason that there is a new order of things in general in this cell community. If these cells had been kept free from this environment all pathologists argue that the cancer would never have found a genesis. This new environment has produced a cell which is described in Ortel's Hypothesis.

---

*Read at Missouri Valley Medical Society, Sept. 19-20, 1918.

A cell that is the beginning of a neoplasm, differs from an embryonic cell in that it has lost its potentiality of differentiation. In suggesting how the cell has lost it, Ortels Hypothesis may be noted that as in the protozoa we find in one cell, two nuclei, one associated with reproduction and the other with the functional activity of the cell. This is true of man and the metazoa. There is chromatin of two orders; one to govern the proliferative, the other the functional capacity of the cell. A carcinoma cell abounds in the proliferative chromatin, having lost most of the functional. Its daughter cell inherits less and less as division goes on until it is a negligible quantity. No less a pathologist than Adami holds this evidence.

We plainly see the influence of this new environment upon the life of the cell. But what has there been about the environment to produce this change? It would require a common cause from all the various etiological tendencies to produce the environment. What is there in common in X-ray, soot of chimneys, smokers irritation, coal-tar workers, Kangri baskets, arsenic poisoning, ulcers of the stomach, etc?

All these factors kill tissues and liberate varying quantities of toxic proteid cleavage. The X-ray over long periods of time will keep a continuous flow of toxic proteids due to death of tissues as will all the other causes of cancer. Would it be reasonable to believe that cells bathed in toxic materials would change their habits of nutrition to meet the new demands brought about by the new environment? Cancer is the result of chronic irritation. It will occur anywhere when the irritation is continued over long periods of time. The presence of pus in the Maxillary Antrum is a splendid example. It is not exposed except to the irritation of toxins and bacteria. The stimulation of the toxins of proteids have a tendency to destroy the life of the cell. This would cause the cell to accentuate its efforts to maintain life, and reproduction, and drop off the higher specialties of function and thus follow the laws of nature in its reversion from a higher to a lower form of life in an unfavorable environment. It is conceded by all pathologists and surgeons that we may reduce the number of cancers by taking care of the irritation areas of our body, by clearing up pus-pockets, by eradicating gastric ulcers, by using lead to protect against Gamma Rays, etc. Now the question arises why do I name the toxic proteids as possible etiological factors? Do they have a malignant effect upon the cells generally as well as locally? Let us see.

Taylor of Pennsylvania says that the cleavage products of proteid tissue is always Amino acid. No matter with what re-agents; steam, ferments, alkali or acids, the ultimate cleavage is Amino acid. The biological chemists have demonstrated that the poisonous substances in the cleavage of proteids is an organic acid which is built upon a well known base. Vaughn, after the long research in proteid, announces that the toxic acid is a benzine derivitive in which an atom of hydrogen is replaced by an hydroxyl group. He further observed that the only oxyphynol compound in the proteid molecule is Tyrosin.

It is very evident that before we will be able to solve the problem of synthesizing these toxic acids into a non-irritating compound, it will be necessary for us to separate each from its proteid radical, to understand its position in that radical, to know how it would combine when liberated as a free acid and its toxic effects upon the tissue. We readily see that we are confronted with a problem of some proportions. We are very conscious that the proteid molecule of every cell, whether it be mammal or bacterial, does contain this poisonous group. Besides this poisonous group from the proteid cleavage, we have active within the cell, the cell ferment, as is evidenced by the autolysis of the liver after death. We have also the ferment which is extra cellular as is evidenced in diphtheria. In thinking of this problem we must know something of the toxic acids derived from proteid cleavage aside from the action of the ferments produced by the cell. When the proteids are broken down, their cleavage acid is liberated from the molecule within the cell. They are unstable compounds that are capable of chemical change and even affected by physical change. They unite when broken by cleavage as is evidenced by their formation of urea for elimination. If they are not so bound, they float free as poisons, an acid of negative electrons or corpuscles. Hence, we have a biological, chemical and electrical imbalance. We know that through the study of colloids, if a cell is hyperacid it will swell with water until several alkalies are brought in to neutralize the acid. Hence, this automatic action seems to prevent the breaking up of the cell balance, if possible. Or in other words, these are negative and positive electron carrying units which seem to be the stabilizing factor that keeps the cell in chemical as well as electrical balance. Regarding the physical change in colloids, A. A. Noyes has shown that in the colloids which are easily coagulated by salts or those which are known as vicious colloids, that by shaking the suspension within a test-tube the colloid may be found to be non-toxic.

By waiting a few moments, shaking the test-tube again and injecting the colloid into a guinea-pig, the substance is found to be exceedingly toxic. This alone would make us think that the proteid combination within the molecule might be exceedingly unstable and would be very prone to unite itself in combination with new organisms in case it was liberated. In the field of bacteriology and serology we have a great application of these principles. We note that all bacteria, pathogenic to man, are proteid splitters. They grow on proteid culture best. They require proteid for their food and as shown select the tissues of the body that serve them best; that they may split that proteid best to acquire their food and for no other reason. This bacterium has fifteen times more weight in proteid in its body than all other substances which lends support to the fact that they are proteid feeders and that their intra and extra-cellular enzymes are proteid splitters for the purpose of splitting off the proteid for their food.

All bacteria seems to be alike in this particular; that they are unable to utilize proteid cleavage which they have split off the proteid cell and are unable to again bind it into a usable food. It poisons them as it does man and they die after they have used the food of the media. There may yet remain much cleavage proteid in this media but he cannot get it for his food. His own waste products from his own metabolism are also in the media. This is not a serious thing. Man's most serious menaces are proteolytic enzymes and the cleavage by-products from any origin.

In establishing an immunity is it not logical to establish an ammunity against this cleavage proteid? This is a fact that we have lost sight of in our serums and leaves our immunity lacking in efficiency.

We saw that the body builded the autolytic proteid cleavage into urea and excreted it as such and that if the production was out of balance with the synthesis, the body was poisoned by the cleavage product. In infection we have the same problem of building these bacterial cleavage products into elimination forms that are not irritating to the body. But is not the urea also increased in infection? Then wherein do they differ? In the cleavage only. There is a difference in the various cleavage proteids of digestion. It requires a different synthesis of each one in accordance to the enzyme splitting it. Von Berymann saw this and found that the pancreas would adjust itself to liberate an enzyme which would differ just a little, so that the various proteids in nature would be split and the proper cleavage proteid provided for the body synthesis. This is the function of the pancreas.

Physiologists were satisfied not to trace proteids beyond the bowel wall and have left its cleavage at this point. In the next few steps the future will reveal the simplicity of all proteid chemistry. The chemistry of proteids will explain digestion, anabolism, catabolism, autolysis, anaboceptros, immunity and all this great nomenclature will be the great simple proteid cleavage. The cells of one's system generally are affected by the poisons of proteid cleavage. These principles apply with telling effect in toxic pregnancies which show a nitrogen imbalance. Again, in intestinal obstruction we see a fine example of their systemic effects. VonFurth shows that an inflamed bowel will absorb faster than an uninflamed one. In obstruction, we have the picture of inflammation, moist gangrene, death of millions of cells and over this area the pancreas pouring its Trypsin constantly. We add bacteria that split this media for food and our picture is autodigestion, autolysis, acidosis. The nearer the ampula of Vater, the more fearful is the result. If you are skeptical of this statement, Kjeldahl the urine for the nitrogen balance in any case of this type of intestinal obstruction or cases of thrombosis of arteries and gangrene. Many illustrations may be used but time does not permit of further discussion here. When we go back to nature to analyze her method we are charmed with her simplicity. Out in the sunshine in nature's wheat fields, chlorophyll is ever busy building from the inorganic world, the ingredients of proteid, fats and carbohydrats. She has anticipated the animal world and indeed her own plant cells and sees that all are furnished with a material which man's body enzymes can utilize by synthesis, into the cell metabolism. Man cannot build proteid in the true sense. The cow acquired her proteid from the grains and grasses. It went through many cycles of cleavage and synthesis either to be stored in her muscle as proteid or reconstructed as milk from her gland and made usable for the next cycle. Man acquires it. The digestive enzymes split it in cleavage, store it as serum albumin or serum globulin, the stock proteids of our bodies, from this, the cells again split it in cleavage and build it into their structure. The mammary gland gets its supply of serum albumin or globulin and transforms it into milk suitable for the babe. The Placenta, perchance, gets its share and builds it into a proteid in the child's body, separate and distinct from any yet mentioned. How necessary it is to have a babe born of its mother. If her mammary gland cannot properly synthesize the proteids, the child is poisoned and acidosis is the result. If the mother becomes angry, the child is poisoned by the proteids in the milk. Now if another carniverous animal comes along this same root radical of proteid goes through another group of cycles, etc. They may be traced indefinitely. The point I wish to show is that the synthesis may be interrupted and the cleavage products uncombined into non-irritating forms where on they become poisons, disturbing the system in general, liver, kidneys, brain, heart, etc., as a general toxine. I called attention to surgical acidosis three years ago in the American R. R. Journal. (Pathology of Traumatic Wounds).

Now let us apply this principle to the cells in a focal area. If an irritant be applied to a small focal area where the cells are constantly dying, they rapidly liberate a proteid cleavage which unites with the cells next to them. It would raise the question in my mind if it were not possible that environment would so modify the habits of this group of cells and cause them to lose their special function, reverting to that primitive type of simple cell reproduction, when they would acquire the habit of reproduction only and persist in it for weeks, months or years and their presence would be noticed as a neoplasm or new growth.

They have builded their nutritional bridges poorly and have provided poorly for defense, due to their change of habits. This neoplasm is called carcinoma. The growth or sarcoma, and all the malignant tumors have an analogous origin but in different tissues, not epithelial.

Should there be truth in this reasoning we can easily see why immunity is so hard to get and probably its solution will yet remain very remote.

## Thrombosis and Embolism of the Mesenteric Vessels.*

Byron B. Davis, Omaha.

The septic thrombosis of the terminal vessels supplying the appendix vermiformis and giving rise to gangrene of the appendix is so common that this form of circulatory obstruction will not be considered in this paper.

Five cases in which definite disturbance of the circulation of the superior mesentric artery and vein or their branches which came to my attention within a period of eight months will be reported in some detail.

Case No. 1. Mr. N. farmer, age 47, entered Immanuel Hospital June 27th, 1916.

About the middle of June 1916 had a severe attack of pain in the right iliac fossa. Took a cathartic and was better. Four days ago, June 23rd, felt indisposed and could not eat. Began to have diarrhoea and nausea. Later he passed some small hard particles from his bowels, shot like, as he described them. Has eaten nothing since except a little soup. Has vomited several times and has been distended with gas since the symptoms began.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

Has had no pain but is sore over abdomen. His heart is somewhat crippled by an old endocarditis.

The next morning, June 28th, after having been packed in ice all night the abdomen was rigid especially in umbilical region. Considerable tenderness over the whole abdomen. Very little discomfort manifested when he is not disturbed.

Operation, June 28th, 1916. On opening the abdomen some adhesions were found about the appendix due evidently to an attack of appendicitis when he was ten years old. The striking thing found was gangrene of the lower ileum extending from 5 inches above the ileocecal valve for 28 inches upward. This amount of ileum was resected and an end to end anastomosis made. He recovered promptly and I saw him 15 months later in September 1917 and he reported himself as having been entirely well from the time of the operation.

My diagnosis was embolus of a terminal branch of the superior mesenteric artery. The line of demarcation between the gangrenous and the healthy part of the ileum was clear cut and the segment of healthy intestine closely adjacent to the gangrenous portion was greatly contracted.

Case No. 2. Mrs. A. B., housewife, aged about 50 years. Entered Immanuel Hospital Nov. 13, 1916. She had a hernia and with this exception had been healthy. Three days before her entrance had been to Lincoln where an advertising hernia specialist had injected her hernia, with what material I did not learn. She promptly fainted in his office but rallied and returned to her home near Nehawka, Nebr., though having considerable pain. About 36 hours later was seized with severe abdominal pain, vomiting and prostration. The following day Nov. 13, 1916 she was brought to Immanuel Hospital by Dr. Thomas of Weeping Water, Neb.

Examination showed a woman with an anxious countenance, temperature 100.8 degrees, pulse 136 and of poor quality, abdomen greatly distended and rigid as a board.

Operation done at once revealed a septic peritonitis. The cavity containing a large quantity of feculent pus. The coils of intestine were greatly dilated and a gap in the small intestine as nearly as I could tell at the lower part of the jejunum. The opening was about one-third inch wide and its length corresponded with the distance from the mesentery to the exact opposite side of the intestine. The artery had been blocked and the perforation corresponded exactly with the area supplied by one of the terminal branches of the vasa intestina tenuis. I cannot prove it, but have always believed a coil of intestine was in the hernial sack at the time the injection occurred and that its walls was pierced by the needle. I do not know what the injected material was but no paraffin was found.

The hole in the intestine was turned in and sutured and free drainage made use of. The patient's condition continued to grow worse and she died at 6 p. m., Nov. 14th, twenty-eight hours after the operation. It is a noteworthy fact that three hours before death her rectal temperature reached 107 2/5 degrees Fahrenheit.

Case No. 3. Mrs. R. housewife, age 22. Nov. 26, 1916, I was asked to see her by Dr. B. W. Christie of Omaha. She was 3½ months pregnant and on the morning of Nov. 25th had sudden severe pain low down on the right side. This was followed by vomiting. When I saw her she had the usual symptoms of a not very severe acute appendicitis. She was tender and rigid over the right iliac region with temperature 100 degrees. Advised operation at once feeling that this was even more imperative than usual on account of her pregnancy but had no thought of finding anything more than an ordinary inflamed appendix.

Operation at M. E. hospital at 3 p. m. of the same day. Dr. Hull assisted. Dr. Christie present. Incision was made along the outer side of the right rectus muscle. As soon as the abdomen was opened gangrenous omentum presented in the wound and on examination the entire great omentum was found gangrenous up to its attachment to the colon. The lower free portion of the omentum was attached to an acutely inflamed but non-gangrenous appendix. The appendix was removed and the entire great omentum was removed by ligating it off in small sections close to the colon and cutting it away. The colon seemed entirely normal but there was no circulation in any part of the omentum.

Her recovery was as uneventful as the average case of ordinary appendectomy and Dr. Christie informs me that her child was delivered in good condition at the proper time.

At first I found this condition hard to explain but believe it was an ascending thrombosis starting from its point of contact with the infected appendix. It is interesting to speculate in regard to what would have happened if the operation had been delayed. Would the gangrene have stopped where it was or would it have continued and involved the vessels supplying the colon? Whatever the answer it has always seemed fortunate that the operation was done promptly.

Case No. 4. Mr. T. was brought to Omaha at 8 p. m. Dec. 10th, 1916 and entered Clarkson Memorial Hospital. Dr. Vance of Peru, Neb., his physician, told me that a few days ago an infected tooth had been pulled but previous to this a tender swelling had appeared on left side of neck.

His condition at entrance was described as a very tender swelling in the left parotid region and under the left ear. His temperature was 101.6 degrees and he had almost wholly lost use of his voice, speaking in a hoarse whisper. The following morning I evacuated a small quantity of pus and introduced a drainage tube. The discharge was not very profuse but his condition remained much the same until 3 p. m., Nov. 13th, he had a severe chill and his temperature rose to 105 degrees. It was then noticed that the right side of his neck was swollen. An incision was made on right side resulting in removal of two or three drams of pus. His temperature dropped down to 99 degrees within a few hours. That night I left the city and did not see him again.

The following day according to records, his temperature rose again to 103 degrees and he began to lose ground very fast. His respirations were labored, his abdomen became greatly distended and he expired at 10 a. m. Dec. 15th.

The autopsy showed that pus had burrowed down along the trachea and the aorta to the bifurcation of the abdominal aorta. The entire small intestine was gangrenous, due apparently to a septic thrombosis of the superior mesenteric artery.

All this chain of calamities resulted from an infected tooth, a powerful sermon in favor of watchful care of the teeth. Whether a deep dissection of the neck might have saved this man is an important question. In a similar case I think I should try it, though it is probable that the burrowing had already proceeded so low that it could not have been reached.

Case 5. Mr. B., age 39 years, entered Clarkson Memorial Hospital Jan. 3, 1917, at 10 p. m. with the history that acute abdominal pain came on at 4 a. m. of the same day. Has had six enemas during the day without any results.

Examination revealed rigid abdominal muscles. Temperature 98.2, pulse 80. Although there was no definite diagnosis of appendicitis, it was felt that was most probable and an immediate operation was advised and accepted.

With Dr. Hull assisting, the abdomen was opened and the sight that met our eyes was startling. Almost the entire small intestine was apparently gangrenous. The peritoneal covering was dull and almost black. The mesenteric vessels were black. Near the ileo-caecal valve, the color was normal, but four or five inches above there was a sharp line of demarcation between the normal and the apparently gangrenous portions. As usual at this point there was a tense constriction. The remaining portion of the ileum and all the jejunum were greatly dilated and dark and lusterless. A small puncture was made in one of the veins in the mesentery. An almost inky condition of the blood was apparent, but it was still fluid, though semifluid might better describe the condition. If only a few feet had been involved I should unhesitatingly have resected, but that, of course, was out of the question.

Feeling that the case would be fatal whatever was done I delivered as much as possible of the intestinal coils through the incision and packed large hot towels over and around them. After a few minutes application of heat a little mottling was noted in a few places and in one or two places a slight pinkish color appeared. After fifteen or twenty minutes application of the moist heat the intestines were with difficulty returned to the abdomen and the wound closed.

Heat was kept applied to the abdomen for the first few days. For three days he vomited frequently and there was great abdominal distention. At the end of that time he began to pass gas, on the fourth day a good bowel movement was produced by castor oil and from this time his recovery was uneventful.

This case seems unique. No one could have seen these intestines without believing that gangrene was present or imminent. There was certainly very great retardation of the circulation, but evidently not complete cessation. I have always questioned whether the operation with the manipulation of the intestines and the use of the heat had any influence for or against recovery. Am inclined to think the operation may have had the effect of reestablishing the circulation. Am greatly satisfied with the result even though my influence in his recovery is so conjectural.

The cause of the condition is also obscure. His arteries seemed normal. There was no indication of any infection. His health previous to the attack had been good. There is plenty of chance for speculation, but very few facts to hang an opinion on.

Much argument has been indulged in regarding the etiology of mesenteric thrombosis and embolism. Most treatises on surgery do not mention the subject at all or dismiss it in a few words. During the past few years a few notable articles have appeared that go into detail and deal with the subject broadly.

One of the most important of these is an article in the Journal of the American Medical Association in 1904 by Jackson, Porter and Quinby. They give a list of 214 cases, including those occurring in Boston hospitals, those collected from friends and from the literature. They seem to consider endocarditis, atheroma of the aorta and arterio-sclerosis, especially of the mesenteric arteries are of the first rank as causes. Sclerosis of the mesenteric arteries has been found even in cases in which the peripheral vessels or the aorta showed no changes, and this may even involve the finest branches.

LaPlace seems to think that in many cases the whole process is infectious, the infections coming from the gut or from some contiguous infection. Skeel considers infection the important etiological factor. Trotter in Cambridge University Press, 1913, makes an exhaustive study of the subject and leaves the impression that he considers infections play a minor part in causing mesenteric embolus and thrombosis.

It seems to me that many different causes may act and that the man who attributes the condition to infection is as near right as the man who looks upon vascular changes as the etiological factor. Either can produce the results. In case one the patient had an old endocarditis, in case three there was undoubtedly an ascending septic thrombosis of the vessels in case four we had a very septic man with pus present and almost if not quite in contact with the origin of the superior mesenteric artery from the abdominal aorta; and in case five where restitution of the circulation occurred, I cannot help suspecting a toxic substance from the intestinal canal playing a part.

I think most of us have gained the impression that bloody and offensive stools are almost always present. This is far from the truth. Case one was the only one of my series with this symptom. Symptoms which tend to make one believe intestinal obstruction is present are found in many of these cases. Do the best we can and many of these cases will be operated without a correct diagnosis.

The mortality is appalling. Most writers give the mortality as 90% or even more. Much depends on the amount of intestine involved and the promptness of the operation. When a large part or all the small intestine is gangrenous the case is hopeless. When only a few inches or a few feet are involved a prompt operation before the intestinal wall has broken down ought to be followed by a small mortality. Those cases not operated till the fecal contents have been discharged into the peritoneal cavity and a septic peritonitis is present will naturally be accompanied by a very high mortality. This is another strong argument in favor of prompt surgical intervention in acute abdominal conditions whether it is possible to make a diagnosis or not.

### Discussion.

**Dr. F. E. Coulter, Omaha.**—I enjoyed the paper and want to thank Dr. Davis. Permit me to call attention to a dictum we use with considerable success in connection with these same conditions where applied to strictly nervous cases. I refer to thrombosis and embolism more especially. Some years ago Dr. Wiley of Edinburgh originated something like this in determining such conditions when taking place in blood vessels of the brain. "An embolus would manifest itself in seconds; a hemorrhage in minutes; a thrombosis in hours, and a neoplasm in weeks or months." It seems to me it might assist the surgeons perhaps if they could determine at the time of the onset the exact nature of the conditions present and which Dr. Davis has so nicely described—the very sudden ones being probably due to embolus; hemorrhage, those of a little longer duration; and thrombosis, those still longer.

**Dr. J. E. Summers, Omaha.**—I believe from my own experience that most cases of this type are accompanied by hemorrhage—a discharge from the bowels. Dr. Davis has shown that all do not—that a great many do not. I have had one case where death resulted from a hemorrhage from the bowel. A postmortem showed the hemorrhage was due to a block in the inferior mesenteric vein. This followed a drainage of one kidney—the right; and two weeks later the drainage of the left kidney for acute pyelitis of pregnancy. I just wish to speak of that hemorrhage. It followed the second operation and was so voluminous as to cause death.

## The Law As It Is Practiced by Lawyers. How Much Of It Do We Want?*

J. L. Sutherland, Grand Island.

The advisability and utility of discussing subjects other than strictly medical, in medical bodies, should be apparent to anyone who gives the matter a thought; for in order that one may be at all competent to meet the various requirements incumbent upon medical men, especially in times and circumstances like the present, he must necessarily be well-informed in countless other matters in addition to that of medicine. Indeed the doctor should be the best-educated man in the community; and not only that he may be able to render the most efficient service to his clientele, but for his own personal and professional protection. He should be well-versed in medical jurisprudence and have a fair knowledge of law in general; and not only a knowledge of the law, but of lawyers and their methods. He should have such knowledge as will enable him to discriminate between the law as laid down in the statutes, and that which the crafty attorney tries to foist upon the unsophisticated jury when a farce, called a trial, is being enacted in court.

In the discussion of a subject of this nature, much could be said as to the attitude of the physician upon the witness stand alone, his rights as well as his duties therein, and if an apology is deemed necessary for a paper of this kind before a body of men of this kind, the pliant tool in the hands of an unscrupulous attorney which the average physician makes of himself when called to give expert testimony, and thereby he not only humiliates himself but the profession also of which he is supposed to be a reliable exponent, a little wholesome ventilation of such conditions would seem not wholly out of place. Furthermore, in as much as that at every meeting of our state association, and sometimes at intervening ones, some phase of medical legislation "bobs up;" and in the discussions which follow almost invariably some member suggests that an attorney be employed to represent us in this, that and the other. To show that we should do nothing of the kind, but manage our own legislative affairs, and to get along with just as little legislation as possible and to give some of the reasons why, are the principal objects of this paper.

It goes without saying that a proper respect for all laws is incumbent upon all good citizens; nor is it either my wish or intention to convey any other impression; but I do intend to show that however just and equitable the law, it is often so manipulated, distorted, circumvented, and obstructed and that too by even the lawmakers themselves as to command anything but respect. It is often sneeringly referred to by members of the legal profession that "doctors disagree," and for this reason medicine is not a science, and because physicians differ, they are not sincere; in other words, dishonest; of which I shall have more to say later on; but to make immediate answer to such sophism I here make the assertion, that of all men upon the face of the earth, who have an utter disregard for the law they are the lawyers for the defense in each and every criminal prosecution. And furthermore any judge upon the bench who will tacitly permit such practices, should forfeit all respect from all law-loving and law-abiding citizens. In proof of these assertions I wish to cite a few facts and figures touching a part of the criminal records, and only a very small part of them, in this country within the last quarter of a century.

In the number of murders per million population, the United States stands first among the civilized nations of the whole earth, present kaiser depredations excepted, the average being 80. Ten times that of England. The United States does not keep a record of its crimes but some of the large newspapers have tried to keep a record, among which is the Chicago Tribune giving special attention to murders, though it can but be conceded that these records, for obvious reasons, lack completeness. These figures show that the rate per million for five years from 1905 was double the average for the preceding five years. The registration area covers only a little over half of the entire population; and if this area shows a fair average for the whole country then the government figures would indicate some six or seven thousand murders each year for the last few years which is a record unequaled by any people in the whole world where records are kept. After making due allowances for inaccuracies a conservative estimate of the number of murders in the United States is seventy or eighty per million population per anum, while the average for England and Wales is only nine per million, Italy less than fifteen, Canada less than thirteen, Germany, prior to August 1st, 1914, less than five. A glance at these figures naturally suggests the question "why?" The answer is equally apparent and I shall endeavor to give it in the context. At the Prison Reform convention held in this city in 1911, Judge DeCoursey said: "In New York City last year (1910) 119 cases of homicide were investigated by the Grand Jury and only forty-five convictions resulted. Chicago reported 202 for the same period and only one of these offenders was hanged, fifteen were sent to the penitentiary, and all the rest, 186, were set free. In Louisville, Ky., with a population of 224,000 there were forty-seven cases of homicide last year, 1910, and not a single murdered was hanged." In 1904 our census bureau endeavored to compile a sort of crime census and although very incomplete it throws some light upon the situation. There were in that year incarcerated in the various prisons of the United States 81,000 persons; of which number 10,700 had been convicted of murder. No figures are available as to the length of time these prisoners would serve, but the list includes a large number sentenced for life and who had already served ten years or more. If we balance these against the still large number who are liberated by pardon, parole, a game of seven-up or what not, at the end of two or three years, it is a pretty safe guess that those who had the misfortune to be convicted, that is those who were too poor and without friends who had a pull, was about ten years. This means, roughly estimating, that not one murderer in ten ever sees the inside of the penitentiary. At least this seems to be fairly borne out by other figures obtained for the year 1904. In that year the Chicago Tribune's figures indicated over 9,000 murders and the census bureau reports that for that year there were 2,444 committed for trial for murder, and in that year there were 106 death sentences, which shows that only about one murderer in four are ever brought to trial, and not one in twenty-five who are brought to trial ever receive the death sentence. More than 100,000 now living in the United States who have never been imprisoned for their crimes. Again the question why? and again the answer, "the practices of criminal lawyers permitted and sanctioned by our criminal courts?" And I here make another assertion; that if the professional criminal lawyer could be eliminated a very different set of figures than those given above would quickly obtain.

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

There is a unanimity of opinion as expressed by our ablest jurists as well as by men in other professions, as to the reason for this abject failure of the law and the disgustingly frequent miscarriage of justice in this country; let us hear a few of them. "It is not too much to say that the administration of criminal law in this country is a disgrace to our civilization and that the prevalence of crime and fraud which is here greatly in excess of that of European countries is due largely to the failure of the law in its administration to bring criminals to justice." Such is the utterance of ex-president Taft and it is only one of many similar ones which he has made at different times and upon different occasions at the time and since he was our chief executive. And it might be well to add right here that he not only said so but took occasion to give us an example by retaining McCabe and Wilson in office after he had exonerated Dr. Wiley.

Here is another reason given by Federal Justice Charles F. Amidon before the Minnesota Bar association. "Our administration of the criminal law has broken down." A reasonable interpretation of which is that the time was, though centuries ago perhaps, when there was such a condition as the administration of justice, and that trials were conducted upon the real merits of each case; but that when he uttered the words just quoted the law is so manipulated by professional criminal lawyers who take much more pains to suppress unfavorable evidence than they do to bring out the favorable, and interject so many meaningless technicalities that the presiding judge is afraid to rule against them for fear that his decisions will be carried up to supreme court and there reversed on error; the definite article "the" perhaps having been accidentlly omitted in the indictment; an actual occurrence in a certain trial in the state of Missouri, of which I shall make mention later on, or that the indictment was not drawn according to a certain prescribed antedeluvian formula. In support of which hear the words of Justice Emory Speer of Georgia who said: "Today it is almost impossible for a judge who feels his nature outraged by a crime even the most henious, to so conduct a trial as to avoid errors in the construction of certain baleful statutes which should be swept from the pages of our legislation." Dean Lawson of the University of Missouri says: "Crime is triumphant for the reason that it has become the rule of action of our Appellate Courts that the penalties consequent upon the commission of a great crime can be escaped by the criminal because of an unintentional committal by the prosecuting attorney of an error of procedure." These are eminent opinions to which countless others could be added. Now what are the facts? Twenty-five years ago these abuses had become so flagrant that a committee was appointed by the American Bar Association to consider the matter and that committee reported that 46% of all cases brought under review of the Appellate Courts of this country were granted new trials. Consider for a moment what this means. It means that out of all the hundreds and thousands of actions, both civil and criminal, brought in the courts of the United States almost half of those that were appealed were reversed. It further means that if these reversals and new trials were right, that justice would have been defeated otherwise, then nearly one-half of the trials in this country were unjust and wrong; then what must we conclude as to the honor, the intelligence and sincerity of our primary courts? Are these courts and the men who practice before them composed of physicians? No, but of men many of them sneeringly assert that "medicine is not a science," that "physicians disagree," and that because they disagree "they are not sincere;" in other words "dishonest." The antithesis of which of course implies that theirs is an exact science; that the members of their profession never disagree, consequently they are all honest. To those of us who have heard of, and sometimes seen two attorneys standing in front of a saloon bar drinking together and playfully slapping each other on the wrist who, not half an hour previous, to all appearances had to be restrained from disfiguring each other's faces in the court-room, nothing further need be said to convince us as to their sincerity; and as long as an attorney for so much money or a first mortgage on a piece of real estate worth four times the amount, will undertake the defense of a common sheep-thief whom he knows should have been in the pen long ago, had better leave the word "honesty" out of his vocabulary. Nevertheless such is the profession and composed of such men who take supreme delight in holding the medical profession up to ridicule and scorn whenever half an occasion arises. Especially is this so when some of our members take the initiative in an endeavor to rid our ranks of a disreputable, who though he may have acquired the title of M. D. and possessed a license to practice but his methods were such as to proclaim him glaringly criminal; then it is when the lawyers for his defense are in their real glory; when they can say, and as one of them did say to a physician, "yours is a fine profession;" "you are a fine set of fellows to turn against one of your number," "you never hear of us lawyers doing such a thing against one of our members no matter of what he may have been accused and however sure we felt as to his guilt; not one of us would take sides against him."

Shall we concede that the fellow forgot himself to the extent that for once in his life he spoke the truth? and if so what effect should that which he said have upon all law-abiding citizens in their estimation of the real status of the legal profession? Does it mean that in their profession there is no such a character as the quack or charletan in ours? or does it mean that there is no difference in the individual honesty and integrity of its members? Or does it mean that all are so corrupt that no one is in position to inform against another? Which of these horns of the dilemma shall we choose? My experience, small as it is, has proven to me that some of the statements made by the legal gentleman as above quoted are not far from the truth. To illustrate, I once knew a lawyer in a certain town in this state, who was commonly called a "jack-leg," whatever that may mean, and who was arrested upon a statutory charge; his accuser being an intelligent little girl of 15 or 16 years of age; and although she told a straight and convincing story, the trial was a perfect farce from start to finish; the prosecution being equally culpable as the defense; and, obedient to the instructions of the judge, this in substance was the verdict: "We find the defendant guilty, but not guilty as charged." Draw your own conclusions as to the honesty of purpose of all the attorneys who took part and the relative positions of legality and justice in that case.

Returning to reservals by our Appellate Courts, Carl Snyder in Colliers, Dec. 2, 1911, said: "The implied libel then upon the primary bench, was in reality directed toward the system and not against the man." Would it not be pertinent to ask who is responsible for the system if it be not the lawyers themselves? Among our law-makers what single profession has the greatest representation? The law every time; 70% of our legislature of both houses are lawyers, and 80% of our United States senate are lawyers. Therefore if the system is wrong and they desired to change it they certainly have the power to do so if majorities mean anything; but the fact that this same pernicious system has not been changed long ago is conclusive evidence that lawyers do not want any change.

Let us take a look at some of these reversals. When the committee appointed by the American Bar Association reported to a body of their own profession that 46% of all the cases brought under view of the Appellate Court were granted new trials and that 60% of this number the appeals turned upon questions of pleading and practice. In other words, miserable technicalities. Concerning this report of a body of lawyers to their own profession and its result, Chas. F. Amidon said: "I have recently looked into this subject with respect to seven representative states of the Union and find the conditions reported to the Bar Association have not improved; on the contrary they have in some respects grown worse. In so far as I have been able to observe, there are two motives that animate every lawyer," note his words, "every lawyer" in the trial of a case in our courts;" "get a victory if you can, but under no circumstances fail to get error into the record." Continuing he says: "I have in mind quite a distinguished lawyer who spent three months preparing himself to be properly surprised by an adverse ruling on a question of pleading." "A trial can be so protected and enmeshed in a complication of pleadings and evidence as to result in a majority of cases in error which under this pernicious doctrine of presumed prejudice, will nullify conviction."

The Hon. Frederic Lehman in an address as president of the American Bar Association, in commenting upon an aggravated case of rape which had resulted in acquittal solely on the ground that the word "the" had been accidentally omitted in the sentence in the indictment which should have read "against the peace and dignity of the state," but read "against the peace and dignity of state" said with bitter scorn, "had a mob assembled to lynch the fiend and had I appeared upon the scene and pleaded with them to let the law take its course, they would have said, "we have no respect for a law which puts the definite article "the" in sanctity above the chastity of our wives and daughters."

Dean Wigmore of the Northwestern University Law School, referring to this Missouri decision based upon the idiotic technicality, said: "We do not doubt that there are hundreds of lawyers whose professional habit of mind would make them decide the same way were they elevated to the bench of Missouri in place of those anachronistic jurists who are there." "The moral is that our profession must be educated out of such vicious habits of thought." But the late Goldwin Smith seemed to have no hope in this direction when he said bitterly, "you might as well expect tigers to clean the jungle of their hiding places, as to expect law reform from lawyers."

Judge Emory Speer, who I have already quoted, says: "A skillful or crafty attorney, though guilt is plain, though sentence has already been pronounced, though the Supreme Appellate Court may have confirmed it, may, by repeated motions on the same point which has already been decided, renew his appeals and thresh over the old straw until a horrified people stand against that the laws made for the administration of justice are utilized for its shameful obstruction." Quotations similar in character could be duplicated to tiresome and disgusting lengths and only a small fractional part of the real truth would be told. Indeed it would seem that the records of our criminal courts contain but little else than appeals, citations of error, reversals, remanding back for new trial, paroles, continuances and perversions et cetra; all of which a suffering public, in addition to "paying the freight" are expected to believe a true, scientific and just administration of the law. Why, if internal medicine or the surgeon's knife had failed even to the one-hundredth part and from the days to Aesculapius down to the present moment, to exemplify the principles upon which our profession is founded or to substantiate by actual results its claims to existence, as criminal justice has failed even within the last quarter of a century, we would have given up in despair and died of mortification long ago. But as not only we know, but as the whole reading world knows, medicine in all its branches and departments, by all it has already accomplished, and by additional problems, the solution of which we know will result in still greater benefit to the human family, is justly entitled to be recognized as a science. That its chief aim and utmost endeavors are to promote and maintain a better standard and a higher degree of general health. That however beneficial the treatment of the sick, the life saving results of which are self-evident both in civil and military life, especially the latter, constitutes only a part of its duties, but to prevent disease is its chief concern. In other words, to diminish medication by establishing and maintaining the most approved methods of sanitation. In contrast to which, whoever heard of a lawyer or an association of lawyers introducing a bill into the legislature the object of which was to diminish litigation? If history ever chronicled such an anomaly I am free to confess ignorance of it.

And yet they have the effrontery to tell us that ours is not a science; that we are narrow in our views, that we are simply actuated by jealousy whenever we seek to punish an offender; that there is no difference in the characters of our individual members but that all are equally guilty, etc. And yet, in the face of these vile accusations in addition to the vast array of evidence as to the trickery and chicanery to which lawyers resort in each and every trial, we must acknowledge the fact, however humiliating, that we have within our profession men who have been entrusted with authority to sit in judgment and administer the laws in matters pertaining to our affairs who have bowed the suppliant knee to these unworthy Baals. We have a committee on public policy and medical legislation; and the discussion of the report and recommendations of this committee occupy no small part of the time of our House of Delegates at each and every annual session; but what need have we for additional medical laws when our own medical officials willfully ignore and set at naught those we already have? As to our legal rights the statutes are sufficiently clear and comprehensive, and are amply sustained by abundant supreme court decisions; notwithstanding which, and the additional fact that the adjudication of all matter pertaining to the trial and punishment of any of our members who may be charged with offenses of any kind has been placed in the hands of medical men and not in those of attorneys, our records show that in some glaring instances our chief medical executives chose to ignore this feature of our legitimate rights, and listening to the crafty sophistries of the unscrupulous attorneys for the defense, admitted to their court's practices which, in point of malignancy and general vilification of the witnesses for the prosecution, were as acrid as any that ever disgraced the records of any criminal procedure. By just such conduct upon the part of those to whom has been entrusted the administration of our laws, laws given to us by statutory enactment and sustained by Supreme Court decisions, by just so much does the entire profession suffer a minimizing of its proper dignity in the estimation of the general public, and by just so much there is placed within the hands of every petifoging shyster an additional weapon with which to defend and accentuate their oft-repeated assertions that in all legal proceedings in which doctors are in any way interested or involved, we are a laughing-stock for the amusement of lawyers and puppets to do their bidding.

Hence, I claim it is not only our right and privilege to be informed upon subjects other than that of medicine, but that it is a duty that each and every one of us owe to ourselves as individuals, and to the profession of which each one of us is an integral part; and, that by the proper use of this knowledge when occasions require we shall be able to intelligently defend our rights, maintain the dignity of our profession, and thus command from other professions and the general public, that respect to which we should be entitled.

Cover up each cough and sneeze. If you don't, you'll spread disease.

THE NEBRASKA STATE MEDICAL JOURNAL
Published monthly by The Nebraska State Medical Association.

J. M. Aikin, Managing Editor..........Omaha

Committee on Journal and Publication.
F. A. Long, Chairman..........Madison
W. O. Bridges..........Omaha
B. F. Bailey..........Lincoln
J. M. Aikin, Ex officio..........Omaha

Subscription $2.00 Per Year. Single Copies 20c Each

All communications should be addressed to
The Nebraska State Medical Journal,
476 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. III. November, 1918. No. 11

### If Your Copy Is Late

Don't scold, because in all our history there never was a time when transportation was so congested for want of rolling stock and efficient help. A similar condition prevails with business houses of every class, the printing press not excepted.

---

Our Journal declines enough proferred advertising to double the pages we print. What better evidence is essential to show the quality of goods we advertise?

---

### Look Out

For the man who solicits you to exchange your Liberty Bond for an investment yielding greater returns on your money, with no risk of loss. He is abroad in the land and pretty certainly a swindler.

---

Because our goal is righteous, our Army and Navy are fearless, beerless and peerless; nor have any class of men in any age of the world history advanced the science of medicine, by discovering the cause and preventing the ravages of disease, as have the military medical men of America.

---

The disingenous plea of a nonbinding conference phrase, looks so well built that the bitter unfairness of its meaning may be missed by the unguarded reader or careless thinker. The wreakage of nations has not been the work of the allied powers, nor is the replacement of reparable damages their task, save as they may undertake it sacrificially.

---

### Announcement.

There will be a meeting of the Program Committee of the Nebraska State Medical Association in December. The place and exact date will be indicated by letter to members of our Committee, who are as follows: J. M. Aikin, Secretary, Omaha; J. S. Welch, Lincoln; H. E. Burdick, David City; B. W. Christie, Omaha; V. V. Smrha, Milligan. Our 1919 State Association meeting convenes in Lincoln the third Tuesday in May. Members desiring a place on our scientific program should submit the title with an abstract of their theme to the Program Committee, not later than January 1, 1919.

---

### The "Flu" Pneumonic Plague.

Several years ago China was visited by a disease which was apparently a direct infection of the respiratory tract, pneumonia very quickly developed and the victim was dead in three to five days. Every civilized country sent medical men to China to study this plague. I was in Vienna when the Austrian doctors returned from China bringing with them flasks containing the causative germ in liquid culture media. These flasks were deposited in the laboratory but during the night some of them were broken and the contents spilled on the floor. Of seven servants who worked in the laboratory that night five died within the week from pneumonia (pneumonia plague). The teachers in the University were very much frightened for fear the thing would get beyond control and the matter was kept secret. Professor Erlich who was an assistant to Eiselberg and Professor Frankel talked about it freely, however, to those of us who were working in the diagnostic laboratories. Rigid isolation of exposed persons and thorough disinfection checked any further spread of the disease and soon we heard no more about it. Is it not possible that we are having an epidemic of Pneumonia Plague the different living conditions in the two countries, China and America, accounting for the differences of mortality in the two countries?

D. T. Q.

## Extract from Letter from Maj. E. L. Bridges.

Base Hospital No. 49, Allerey, France.
Dated October 4th, 1918.

The first part of our stay dragged a little due to the incompleted condition of the hospital and the consequent lack of patients. Some of the staff, especially on the surgical side, became considerably disgruntled because they had nothing to do, but for the past few weeks they have been too busy to even peep.

Four of our men are away at present, which represents about the proportion we may expect to have away, on the average, at all times. Three other men, Walker, Riggert and Park hold purely clerical positions, so are unavailable for professional work. Despite this shortage of seven men our capacity has been increased from 1000 to 1940 beds.

At first the medical cases were greatly in excess of the surgical, about 4 to 1, but since the big drive started they have steadily gained on us, and now lead by a good big margin which is increased with each train that comes in. At the present moment we have 800 surgical and 600 medical cases with 3 more trains due in tonight. I have only four men on the medical side so you may imagine how busy we are kept.

There is not a very great variety in the medical cases though we have many that are most interesting. The predominating diseases are influenza, gastro intestinal affections, gas cases, acute respiratory and the pneumonias. The latter are our greatest bugbear. The most of them are a very virulent and unusual type of broncho-pneumonia. Unusual in the sense that there seems to be a special predilection to attack the interstitial tissue so that the lung at autopsy is heavy and elastic, rather than friable. The physical signs are also deceptive as over these large areas of apparently complete consolidation, bronchial breathing is either absent or very distant, and moist rales may be heard all over these areas. Pleuritic friction sounds are frequent but there is very little tendency to effusion.

The pulse runs from 100 to 110 but the respirations and temperature are relatively low—24 to 20 and 100 to 102 respectively. After a few days there is usually a betterment in the conditions, the temperature may go to normal and the pulse and respiratory rate decrease. After a few days the temperature again begins to climb and goes to 104-5 and remains at this level for several days until the patient expires. The most conspicuous thing in the clinical picture is the marked toxicity manifest from the first and which does not show any improvement when there is an apparent betterment in the course.

The leucocyte (white) and blood pressure are low. In about 85% of our cases coming to post, there is pus in the sinuses, particularly the sphenoid. In a case today there was pus in both antrums, the sphenoid, ethmoid and frontals. In nearly all the cases pneumonococci are cultivated from the lung secretion, hearts blood and pus in the sinuses.

The heart rarely shows endocardial changes though in several there has been a marked fibrinous exudate on the pericardium.

It is a question, which we are trying to decide, whether the sinus trouble is primary or secondary; but as yet we have no proofs for either contention. My belief is that the sinus is primary because the lesions look older than the lung changes and because the lung pathology appears to start centrally and spread peripherally indicating an inspiratory infection. In all cases the involvement of the sinuses are characterized by the absence of symptoms pointing to these areas.

The gassed cases of the respiratory type do not show any signs on examination of the chest. There is a most distressing, improductive cough with burning under the sternum and in the epigastric region. Frequent sharp pains are also complained of along the lower margin of the ribs on one side or the other. Dyspnoea, cough and rapid heart action on exertion are the most conspicuous symptoms.

The gastrointestinal cases for the most part run a short course but a few resemble closely a typhoid. We have as yet been unable to isolate the offending organism.

The surgical side is now getting most interesting work as the cases in many instances are coming direct from the field hospitals. They have three wards of fractures to say nothing of the shrapnel wounds and mustard gas burns.

I suppose Kathryn has told you something of the center as a whole. It is designed to accommodate 10 units and there are here now seven though only four are permanent.

As the new ones come in the older inhabitants have the privilege of dumping the less desirable work and as we stand now we are permitted to send all G. U., T. B., skin and contagious cases to the newer arrivals, so our work is all interesting.

---

## Birth Statistics in the Registration Area of the United States, 1916.

Washington, D. C., Oct. 28.—In the recently established birth-registration area of the United States—comprising the six New England states, New York, Pennsylvania, Maryland, Michigan, Minnesota, and the District of Columbia, with an estimated population of 33,000,000, or about 32 per cent of the total population of the United States—818,983 infants were born alive in 1916, representing a birth rate of 24.8 per 1,000 of population. The total number of deaths in the same area was 486,682, or 14.7 per 1,000. The births thus exceeded the deaths by more than 68 per cent. For every state in the registration area, for practically all the cities, and for nearly all the counties, the births exceeded the deaths, usually by substantial proportions. The mortality rate for infants under one year of age averaged 101 per 1,000 living births. The foregoing are among the significant features of the report, "Birth Statistics in the Registration Area of the United States, 1916," soon to be issued by Director Sam L. Rogers, of the Bureau of the Census, Department of Commerce, and compiled under the supervision of Dr. William H. Davis, chief statistician for vital statistics.

### Comparison With 1915.

The birth rate for the entire registration area fell below that for 1915 by one-tenth of 1 per 1,000 population; while the death rate exceeded that for 1915 by seven-tenths of 1 per 1,000. The excess of the birth rate over the death rate for 1916, 10.1 per 1,000, was thus a little less than the corresponding excess for 1915, which was 10.9 per 1,000. If the birth and death rates prevailing in the later year were to remain unchanged, and if no migration were to take place to or from the area to which they relate, its population would increase annually by about 1 per cent. This rate, compounded for a decade, would yield a decennial increase of a little more than 10 per cent, or about half the rate of increase in the population of the country as a whole between the last two censuses, 21 per cent.

### White and Colored.

Of the total number of births reported, 799,817, or 24.9 per 1,000, were of white infants, and 19,166, or 22.8 per 1,000, were of colored infants. The death rates for the two elements of the population were 14.5 and 24.4 per 1,000, respectively. The deaths reported for the colored races (comprising all non-whites) thus exceeded the births reported; but it is probable that the registration of births is less nearly complete among the colored than among the white population, and that therefore the rate shown for the former class is too low, whereas in the case of the death rates there is probably not so great a margin of error.

### Native and Foreign Mothers.

Some indication of the fecundity of the native and foreign elements of the population may be obtained from a comparison between the proportion which the number of white foreign-born mothers formed of the total number of white mothers to whom children were born in 1916, and the proportion which the white foreign-born married women, aged 15 to 44, formed of the total number of white married women of corresponding ages in 1910.

From the table following, it appears that many more births occur to white foreign-born women, proportionately to their number, than to native women. In Connecticut, approximately 46 per cent of white married women aged 15 to 44 in 1910 were of foreign birth, but about 62 per cent of the white mothers to whom children were born in 1916 were natives of foreign countries.

| State | 1916, per cent which foreign-born mothers formed of total white mothers. | 1910 per cent which foreign born married females, 15-44, formed of total white married females, 15 to 44 |
|---|---|---|
| Connecticut | 61.63 | 46.36 |
| Maine | 27.23 | 21.89 |
| Maryland | 14.82 | 13.11 |
| Massachusetts | 56.32 | 48.87 |
| Michigan | 32.80 | 26.45 |
| Minnesota | 26.80 | 33.99 |
| New Hampshire | 41.69 | 32.69 |
| New York | 52.84 | 42.71 |
| Pennsylvania | 37.65 | 27.77 |
| Rhode Island | 57.37 | 49.94 |
| Vermont | 24.04 | 18.11 |

### Infant Mortality.

The infant mortality rate—that is, the number of deaths of infants under one year of age per 1,000 born alive—throughout the registration area as a whole was 101 in 1916, as against 100 in 1915. This is equivalent to saying that of every ten infants born alive one died before reaching the age of one year. Among the 11 states these rates ranged from 70 for Minnesota to 121 for Maryland; and for the white population separately the lowest and highest rates were 69 for Minnesota and 115 for New Hampshire. The high rate for the total population of Maryland was due to the presence of a larger colored element in that state than in any of the others, the rate for the whites alone being only 101.

The infant-mortality rates vary greatly for the two sexes and for the various nationalities.

With an infant-mortality rate of 101 for the registration area as a whole, the rate ranges for white children from 68 where mothers were born in Denmark, Norway and Sweden, to 148 where mothers were born in Poland, while Negro children have a rate of 184. The range of rates among white males is from 74 for children of mothers born in Denmark, Norway and Sweden, to 171 for those of mothers born in Poland, while Negro males have a rate of 202. The corresponding rates for females were 62, 124, and 166, respectively.

### States and Cities.

The following table shows, for the birth registration area, by states and by cities having more than 100,000 inhabitants in 1910, the number of births in 1916, the per cent of excess of births over deaths, and the infant-mortality rate. Figures for the white and colored elements of the population are shown separately for those areas in which colored persons constitute more than one-tenth of the total population.

**Excess of Births Over Deaths, and Infant Mortality. 1916.**

| Area | No. of births. | Excess of births over deaths (per cent) | Deaths of infants under 1 year of age per 1,000 living births. |
|---|---|---|---|
| Registration area | 818,983 | 68.7 | 101 |
| Registration states. | | | |
| Connecticut | 35,351 | 74.2 | 101 |
| Maine | 16,033 | 32.5 | 108 |
| Maryland, total | 33,631 | 49.7 | 121 |
| White | 27,305 | 63.9 | 101 |
| Colored | 6,326 | 6.0 | 209 |
| Massachusetts | 93,497 | 65.1 | 100 |
| Michigan | 86,840 | 88.1 | 96 |
| Minnesota | 55,459 | 127.1 | 70 |
| New Hampshire | 9,664 | 35.4 | 115 |
| New York | 241,456 | 58.8 | 94 |
| Pennsylvania | 217,449 | 74.7 | 114 |
| Rhode Island | 14,634 | 53.5 | 111 |
| Vermont | 7,768 | 37.2 | 93 |
| Registration cities having more than 100,000 inhabtants in 1910. | | | |
| Connecticut: | | | |
| Bridgeport | 4,598 | 94.8 | 106 |
| New Haven | 5,106 | 100.6 | 88 |
| Maryland: | | | |
| Baltimore, total | 14,542 | 36.5 | 122 |
| White | 12,278 | 54.1 | 104 |
| Colored | 2,264 | *16.6 | 219 |
| Massachusetts: | | | |
| Boston | 19,577 | 53.3 | 105 |
| Cambridge | 2,691 | 76.3 | 91 |
| Fall River | 3,689 | 68.8 | 173 |
| Lowell | 3,287 | 67.6 | 146 |
| Worcester | 4,941 | 70.2 | 101 |
| Michigan: | | | |
| Detroit | 24,289 | 121.6 | 112 |
| Grand Rapids | 3,131 | 100.0 | 75 |
| Minnesota: | | | |
| Minneapolis | 8,793 | 95.2 | 82 |
| St. Paul | 5,242 | 87.6 | 68 |
| New York: | | | |
| Albany | 2,280 | 11.4 | 97 |
| Buffalo | 13,088 | 73.3 | 114 |
| New York | 137,923 | 77.0 | 93 |
| Rochester | 6,816 | 82.6 | 86 |
| Syracuse | 3,853 | 63.2 | 100 |
| Pennsylvania: | | | |
| Philadelphia | 40,360 | 45.7 | 105 |
| Pittsburgh | 16,406 | 62.6 | 115 |
| Scranton | 3,623 | 71.5 | 131 |
| Rhode Island: | | | |
| Providence | 5,981 | 48.7 | 110 |
| District of Columbia: | | | |
| Washington, total | 7,201 | 11.2 | 106 |
| White | 4,979 | 25.3 | 83 |
| Colored | 2,222 | *12.2 | 158 |

*Percent by which births fell below deaths.

## Abstracts.

At the time of the introduction of Carburetted Water Gas as a substitute for Coal Gas we were entertained by articles on carbon mixture poisoning, as this new gas contained as much as thirty per cent of carbon monoxide, while the old coal gas hardly contained ten per cent. The literature gave us a very good account of the effects of this type of poisoning.

It is interesting at this time to note that articles are appearing on carbon monoxide poisoning which confirm the experience of earlier observers. It is well to remember that whenever a carbon compound or carbon undergoes only partial combustion carbon monoxide is to be reckoned with in the end products. The old charcoal burner, coal stoves, gas flames under certain conditions, escaping gas not undergoing combustion, exhausts from automobiles, and the gases from exploding shells, all furnish their quota of carbon monoxide and are consequently to be looked upon as dangerous.

Many cases of carbon monoxide poisoning will come under the doctors notice in these days produced in those confined in a closed garage while the automobile engine is running. The immediate symptoms may be taken care of by the doctor but a close study of the aftermath must not be neglected. A close study of the loss of memory attending these cases gives us a chance to read the articles coming from the front over there and comparing this phase as seen in the soldier poisoned by carbon monoxide from exploding shells and the patient at home suffering from the same poison taken in his garage. Never run an internal combustion engine in a closed room. Charles Crowley.

## Venereal Disease Control.*

### Standards for Discharge of Carriers.

The following instructions to directors of government clinics operated by the Public Health Service and American Red Cross in extra-cantonment zones are published with the hope that they may answer the numerous requests which have been made for government standards for the purely medical aspect of venereal disease control. (Diagnosis and treatment are not considered in these instructions).

---

*Reprint from the Public Health Reports, Vol. 33, No. 29, July 19, 1918, pp. 1189-1190. 73484°—18.

### Standard Procedures to be Followed Before Discharging as Noninfectious.

### SYPHILIS.

A person infected with the Treponema pallidum may be considered, from a public health point of view, to be free from danger of transmitting the infection when a complete clinical examination, in which special emphasis is laid on the thorough exploration of the skin and mucous membranes, particularly those of the orifices of the respiratory, gastro-intestinal, and genito-urinary tracts, shows the absence of any area from which infectious matter can be disseminated.

When a patient is discharged as noninfectious under the above ruling, he must, of course, be plainly advised that his disease is not cured, and that although noninfectious at the time, he may subsequently become infectious to others through contact, and that the disease will probably be transmitted to his offspring until he is actually cured by a proper course of treatment carried on for a definite period. He should, therefore, be warned to remain under observation until such time as complete cure is effected.

In the light of our present knowledge the following seem to be the minimum requirements for cure: No case should be considered as cured for at least one year after the termination of treatment and unless the following conditions have been satisfied: (a) No treatment for one year during which time there have been no symptoms, no positive and several negative Wassermann reactions. (b) A negative provocative Wassermann reaction. (c) A negative spinal fluid examination. (d) A complete negative physical examination, having special reference to the nervous and circulatory systems. (e) A luetin test may also be included.

### GONORRHEA. (CLAP).

#### Males.

Before discharging cases as noninfectious, the following four requirements must be met:

1. Freedom from discharge.
2. Clear urine; no shreds.
3. The pus expressed from the urethra by prostatic massage must be negative for gonococci on four successive examinations at intervals of one week.
4. After dilation of the urethra by passage of a full-sized sound, the resulting inflammatory discharge must be negative for gonococci.

#### Females.

1. No urethral or vaginal discharge.
2. Two successive negative examinations for gonococci of secretions of the urethra, vagina, and the cervix, with an interval of 48 hours and repeated on four successive weeks.

(This rule is laid down as the best practical method at our disposal at present, but it is fully realized that such negative findings may not in every instance be conclusive as to freedom from infection, and the patients should be requested to return at frequent intervals for subsequent examination. In fact, all the foregoing rules governing discharge as noninfectious are tentative and will be subject to revision should the combined experience of directors of clinics or others indicate the necessity therefor).

3. **Technic for procuring smears from the cervix and urethra.**—Slides should be prepared from the secretions procured from the urethra and cervix, as well as from secretions which may be expressed from Skenes and Bartholins glands. In preparing urethral slides the finger should be inserted in the vagina and expression made on the floor of the urethra from within outward, the cotton-tipped probe being then introduced well into the meatus. In procuring smears from the cervix a vaginal speculum should be introduced and the cervix well exposed. All secretions should be mopped away from the external os before taking the smear. After the cervix is well dried, a probe, tightly wound with cotton, should be inserted into the cervical canal and rotated several times. It is exceedingly important that the secretion from the cervix shall be in reality cervical secretion and not mucus of pus from the vagina. It is advised that two or thrree slides be prepared from both urethra and cervix.

---

## NEBRASKA SUPPLEMENTARY LIST
## SEPT. 1 TO 25, INCL.

#### Recommended for Commissions in M. O. R. C.

| | |
|---|---|
| Herbert Alonzo Copsey, Alliance | Capt. |
| Charles Camren Paxton, Archer | 1st Lieut. |
| Alfred Alexander Tyrell, Beatrice | 1st Lieut. |
| Henry Bruce Landis, Broken Bow | Capt. |
| Rudolph Frederick Decker, Byron | 1st Lieut. |
| Joseph John Srb, Dwight | 1st Lieut. |
| Lester Clyde Hilsabeck, Gretna | 1st Lieut. |
| Joseph Burns McPherson, Hastings | Capt. |

| | |
|---|---|
| George Edgar Williams, Havelock | Capt. |
| Jay L. Magill, Holdrege | 1st Lieut. |
| William Howard Heine, Hooper | Capt. |
| Fred Allard Lemar, Humphrey | Capt. |
| Frederick Moore Andrus, 114 N. 13th Lincoln, | 1st Lt. |
| Gustave Adolph Des Jardien, 140 South 13th Street, Lincoln | 1st Lieut. |
| Roscoe Likes Smith, 211 First Nat. Bank Building, Lincoln | 1st Lieut. |
| Henry Peter Wekesser, 904 E. St., Lincoln, | 1st Lieut. |
| Theodore Joseph Kerr, First National Bank Bldg., North Platte | Capt. |
| LeRoy Jones, 1514 First Ave., Scottsbluff | Capt. |
| Lincoln Riley, Winser | Capt. |

## STATE NOTES.

John C. Davis, Jr., is at Base Hospital No. 88, New York.

Homer D. Lurvey has been ordered to Fort Riley, Kansas, for service.

Dr. John D. Simpson has been commissioned a captain in the Medical Corps and ordered to Fort Riley, Kansas.

Dr. Frank M. Conlin, Omaha, is recovering from an attack of pneumonia.

Dr. A. L. Key, of Cambridge, is recovering from an attack of flu and pneumonia.

Dr. Chas. F. Moon, Superior, Wyoming, was a recent caller in the Journal office.

The wife of Dr. Geo. E. Peterson, Bloomfield, Nebraska, died recently of pneumonia.

Word has been received that Drs. J. A. Henske and Newell Jones have arrived safely over there.

Dr. C. W. N. Poynter has been appointed state director of the first aid department of Nebraska Red Cross, to succeed Dean Irving S. Cutter, who has resigned to enter military service.

Dr. W. R. McGrew of Omaha, has been commissioned Captain in the M. R. C. and has been assigned to duty at Camp Funston pending overseas service.

Dr. Lloyd Leslie Nelson of Norfolk, Nebraska, has been commissioned First Lieutenant in the M. R. C. and expects to leave for Fort Oglethorpe, Ga., to take army training in a short time.

Commissioner of Health Wild states that as far as the Department of Health of Nebraska is aware, there is no vaccine that can be guaranteed for either its protective or its curative value in the epidemic of "flu."

Capt. Luther Leisenring, medical corps at Camp Fremont, California, son of Dr. P. S. Leisenring, formerly of this city, has been transferred to the eighth infantry and may go overseas.

Dr. A. A. Fricke, of South Omaha, now Major Fricke, writes from "Somewhere in France" that he is enjoying life in a dugout and getting lots of war and surgical experience as a surgeon with the One Hundred and Twenty-sixth Engineer battalion, Paris group.

Dean Irving S. Cutter has accepted a captaincy in the Medical Corps, and has gone to Base Hospital, Camp Gordon, Atlanta, Georgia. The University Regents have granted his leave of absence for the period of the war, and have appointed Doctor C. M. W. Poynter acting dean to serve during his absence.

The officers of the Elkhorn Valley Medical Society have decided to omit the regular winter meeting. Perhaps by next summer war conditions may be more favorable for a good attendance and varied program.

Dr. John D. Reid, President.
Dr. A. P. Overgaard, Secretary.

At the present time there are ten physicians in Nebraska working for the government and it is hoping to obtain two more. These physicians are working in communities that are badly stricken or where there has not been or is not at present any medical assistance obtainable. This is being done under the direction of Surgeon General Blue of the Public Health Service Department.

Capt. E. A. Van Fleet, writes: "Since I reported at Fort Sam Houston, Texas, May 22, 1918, I have been assigned at Base Hospital No. 1 for one month, at Camp Stanley, twenty miles from the base for ten days, at the Old Infantry Post with a Battalion of U. S. Guards, and now I am at the Base Hospital again. Thus I have spent all the summer and fall in and around Fort Sam Houston. My duty has been so varied that it included all lines of Army medical and surgical work."

Dr. C. W. Mason, class 1905, College of Medicine, University of Nebraska, writes a very interesting letter from Chieng Rung, Yunnan, China. He is ninety miles from a post office. He is a Medical Missionary under the American Presbyterian Mission. His nearest trained physician and surgeon associate is fifteen days travel south, and the next is twenty-three days travel north. He expresses great pleasure from reading the Nebraska State Medical Association Journal, and appreciation of his membership card in the Douglas County and Nebraska State Medical Association.

Dr. J. W. MeKean, for many years a medical missionary in Siam, has returned to his work after more than two years absence. The doctor takes special interest in the subject of leprosy. On his way back to Siam he visited Leper Asylums through Japan, Korea, China and the Philippines. On arrival at Bangkok, he had the great privilege of an audience with his Majesty the King, who desired a report of his tour of Leper Asylums. His Majesty listened attentively, then gave command to two of his Ministers to make a leper census of his Kingdom. The father of the present King donated a beautiful island and $10,000 for use by Dr. McKean as he devised in caring for the sick and promoting sanitary measures in Siam. A Leper Asylum on the island was the result of that gift. Since the work began ten years ago 406 lepers have been cared for in the Hospital, and scores as outdoor patients. The present King gives evidence of wanting to enlarge the gift, and add his Majesty's influence to the splendid accomplishments of Dr. McKean and his associates, in demonstrating the possibilities of modern medicine for the benefit of humanity.

## DEATHS.

Dr. Guy L. Weigand, senior interne at the University of Nebraska Hospital, died of pneumonia Oct. 28.

Dr. Edward Miller Ware, Beatrice, Neb., University of Nebraska, Omaha, 1907, aged 43, at one time a fellow of the American Medical Association; a member of the Nebraska State Medical Association; died at his home, October 14, from influenza.

Dr. E. A. Hudson, of Edison, Neb., died Oct. 7, at the hospital of A. L. Kee, M. D., at Cambridge, from cerebral hemorrhage. He was a member of the Nebraska State Medical Association.

## Orders to M. R. C. Officers From Nebraska for the Month of October.

October 5,

To Camp Crane, Pa., from Camp Devens, Capt. J. A. Henske, Omaha.

To Camp Upton, N. Y., base hospital, from Jefferson Barracks, Lieut. J. C. Davis, Jr., Omaha.

To Fort Oglethorpe for Instruction, Lieuts. J. H. Boyes, Hebron; D. C. Sigworth, Stanton; from Fort Riley, Capt. F. H. Kuegle, Omaha.

To Fort Riley for instruction, Lieut. F. S. Salisbury, Broken Bow.

Resignation of Major J. P. Lord, Omaha, accepted.

October 12.

To Camp Crane, Pa., from Camp Custer, Lieut. O. E. Coleman, Ainsworth.

To Camp Custer, Mich., base hospital, from Western Department, Capt. C. H. Campbell, Columbus.

To Camp Jackson, S. C., base hospital, from Camp Joseph E. Johnston, Lieut. J. W. Duncan, Omaha.

To Camp Sherman, Ohio, base hospital, from Cape May, Major E. C. Henry, Omaha.

To Camp Travis, Texas, from Fort Riley, Capt. H. L. Starkey, Wood River.

To Fort Leavenworth, Kan., Lieut. H. H. Johnson, Winnebago.

Honorably discharged on account of physical disability existing prior to entrance into the service, Capt. E. R. Porter, Omaha.

October 19.

To Berkley, Calif., University of California, from Houston, Lieut. J. R. Kleyla, Omaha.

To Camp Bowie, Texas, base hospital, for instruction, from Fort Oglethorpe, Capt. G. H. Rathbun, Fremont.

To Camp Crant, Pa., from Fort Oglethorpe, Lieut. C. B. Coe, Wakefield; from Hoboken, Major A. J. Brown, Omaha.

To Camp Jackson, S. C., base hospital, for instruction, from Fort Oglethorpe, Major S. R. Hopkins, Hastings.

To Camp Joseph E. Johnston, Fla., from Fort Oglethorpe, Capt. A. E. Gadbois, Madison.

To Camp Meade, Md., evacuation hospital, from Watervliet, N. Y., Capt. J. Buis, Pender.

To Fort Oglethorpe for instruction, Capt. T. J. Jones, St. Edward.

To Fort Riley, as orthopedic surgeon, from Camp Travis, Lieut. L. K. Strate, Hastings.

To New Haven, Conn., Yale Army Laboratory School, for instruction, from Atlanta, Capt. E. H. McLean, Omaha.

To Camp Dodge, Ia., base hospital, Lieut. B. M. Kully, Omaha.

To Fort Des Moines, Ia., from Fort Crook, Major E. L. Delanney, Omaha.

To Fort Oglethorpe, for instruction, Lieut. O. R. Platt, Hebron.

To Fort Riley, base hospital, from Fort Oglethorpe, Capt. J. J. Snipes, Lincoln.

To Hoboken, N. J., base hospital, from Camp Zachary Taylor, Capt. C. H. Campbell, Columbus.

To Rochester, Minn., Mayo Clinic, for instruction, and on completion to Camp Grant, Ill., base hospital, for instruction, from Fort Riley, Capt. C. L. Fahnestock, McCook.

To Rockefeller Institute for instruction in the treatment of infected wounds, and on completion to Camp Greene, N. C., from Fort Oglethorpe, Capt. W. T. Carson, Hastings.

## COMMISSIONS OFFERED AND ORDERED TO DUTY ON ACCEPTANCE.

October 5.

To Fort Oglethorpe for instruction, Capt. L. Riley, Wisner; Lieut. J. J. Srb, Dwight.

To Fort Omaha, Neb., Lieut. L. C. Hilsabeck, Gretna.

October 12.

To Camp Dodge, Iowa, base hospital, Capt. H. B. Landis, Broken Bow; Base Hospital for instruction, Lieut. H. P. Wekesser, Lincoln.

To Camp Logan, Texas., base hospital, Capt. J. B. McPherson, Hastings.

To Camp Pike, Ark., for instruction, Capt. G. E. Williams, Havelock.

To Denver, Colo., Capt. L. R. Jones, Scottsbluff.

To Fort Oglethorpe for instruction, Capts. W. H. Heine, Hooper; F. A. Lemar, Humphrey; Lieut. R. L. Smith, Lincoln.

To Fort Riley for instruction, Lieuts. A. A. Tyrrell, Beatrice; R. F. Decker, Byron; G. A. Des Jardin, Lincoln.

October 19.

To Camp Jackson, S. C., base hospital, for instruction, Capt. C. H. Newell, Omaha.

To Camp Pike, Ark., base hospital, for instruction, Lieut. C. Emerson, Lincoln.

To Camp Travis, Texas, base hospital for instruction, Capt. F. E. Nail, Riverton.

To Fort Riley, Capt. L. D. Pillsbury, Lincoln; Lieut. A. N. B. Lemoine, Nelson; for instruction, Capts. H. A. Copsey, Alliance; R. G. Rich, David City; T. J. Kerr, North Platte; Lieuts. G. C. Winterson, Omaha; J. C. Newman, Wallace.

To San Antonio, Texas, Lieuts. S. O. Pitts, Alda.

To Camp Bowie, Texas, base hospital, for instruction, Lieut. C. C. Hickman, Lincoln.

To Camp Dodge, Ia., base hospital for instruction, Lieut. R. L. Ivins, Crawford.

To Camp Gordon, Ga., base hospital, Capt. I. S. Cutter, Omaha.

To Fort Oglethorpe for instruction, Lieuts. T. T. Harris, B. A. McDermott, Omaha.

To Fort Riley for instruction, Capt. F. J. Kalal, Clarkson; Lieuts. G. W. Briggs, Arthur; C. E. Kidder, Holstein.

# THE NEBRASKA STATE MEDICAL JOURNAL

ESTABLISHED 1916 BY THE NEBRASKA STATE MEDICAL ASSOCIATION
NEXT ANNUAL SESSION, LINCOLN, MAY 19, 20, 21, 1919.

Vol. III. Norfolk, Nebraska, December, 1918. No. 12

CONTENTS.

Page
Hemolytic Jaundice With Report of Cases, W. O. Bridges, M. D., Omaha.................... 361
Medical vs. Surgical Treatment of Gastric and Duodenal Ulcer, J. M. Mayhew, M. D. 369
The Radical Operation for the Treatment of Acute or Subacute Peritonsillar Abscess, Henry B. Lemere, M. D.................. 372
Pyelography, Indications and Technic, Clarence Emerson, Ph. D., M. D., Lincoln 377
Serial Extraction in Pyorrhea, W. Clyde Davis, M. D., D. D. S., Lincoln.................. 380
Page
Editorial ............................................................. 382
State News ............................................................. 385
Deaths ............................................................. 386
A Neglected Sanitary Problem...................... 386
Orders to Officers from Nebraska of the Medical Corps, U. S. Army......................... 386
Commissions Offered and Ordered to Duty on Acceptance .............................................. 387
Index to Volume III........................................... 391

## Hemolytic Jaundice With Report of Cases.*

W. O. Bridges, M. D., Omaha.

Not until very recently has there appeared in text books on internal medicine any reference to the syndrome which we now recognize as Hemolytic Jaundice or Acholuric Icterus, and in these such scant information is obtained that one must appeal to the widely scattered articles which have appeared during the past six or eight years, in domestic and foreign publications.

To the reports of Minkowski, Bettman, Pick, von Kranhals, Chauffard, Barlow and Shaw, Strauss, Thayer and Morris, and Giffen in the present year are we indebted for a mass of clinical and laboratory evidence upon which is founded the recognition of a symptom group which as stated by Giffen, "may be regarded as the diagnostic keystone of the diseases associated with enlargement of the spleen and anemia." In clinical significance, writes Giffen, "it occupies the center of a group of diseases with cirrhosis of the liver, syphilis of the liver with splenomegaly, and obstructive forms of chronic jaundice on the one hand; and pernicious anemia, splenic anemia, leukemia, and splenic Hodgkins disease on the other."

### Definition.

Hemolytic Jaundice may be defined as a splenomegaly associated with intermittent acholuric jaundice, anemia, decreased resistance of the red cells, running a variable course over many years, and presenting in two types, the congenital or familial and the acquired.

One of the first publications by Minkowski in 1900 reported a group of individual histories belonging to one family showing the characteristic symptoms of a chronic acholuric jaundice, and which could be traced through three generations affecting eight members of the family. In the Giffen report of the present year, fourteen of the seventeen cases were congenital or familial in type, the remainder were considered acquired.

### Clinical History and Course.

The clinical history is very similar in both types of the disease, varying in the family history, in the period of commencement, the intensity of symptoms; and presenting differences in the characteristic resistance and auto agglutinative tests of the red cells.

---

*Read before the Chicago Medical Society, January 30, and the Nebraska State Medical Association, May 8, 1918.

Variable jaundice, anemia, periods of fatigue and fever, slight dyspnoea on exertion, occasional edema of the lower extremities, discomfort in the upper abdomen with occasional attacks of pain, normal colored stools and acholuric urine with enlargement of the spleen, constitute the main symptoms.

The course is extremely variable extending in most cases over many years. There are periods of remission in which subjective symptoms are not complained of and exacerbations which require more or less confinement. There is complete absence of the phenomena of biliary intoxication, there is no itching, very little tendency to hemorrhage, no bradycardia, no eruption. However, not infrequently, attacks of biliary colic complicate the course with increase of jaundice, fever, bile colored urine and clayey stools which in some instances has lead to operation on the gall bladder.

### Analysis of Symptoms.

Jaundice is usually constant, moderate in intensity but varies from a pale lemon hue to an extreme golden yellow. In the periods of remission when there are few or no subjective symptoms it may be very slight. In the active periods it may be as intense as in obstructive jaundice. The sclera is always yellow tinged, the stools of normal color from contained bile. There is no pruritus.

### The Blood Picture.

Variable anemia is present, the mucus membranes and finger nails are pale, the blood pressure is low, a systolic murmur is usually heard over the entire precordium or more commonly at the base and in the neck vessels. Exceptionally these signs are not present or are much modified in remissions.

### The Red Cells.

The red cells are usually diminished in number, may be as low as 1,500,000 or in exceptional cases near the normal. There is commonly anisocytosis and to a less degree poikilocytosis. The average size was found by Chauffard to be commonly below the normal. The hemoglobin is reduced but not always in proportion, the index being high.

Chauffard also describes a peculiar basophilic granulation of the red corpuscles on vital staining which he found in all his cases studied. Many of the cells showing a fine granulation of a bright red color. Vaughn had previously shown this to exist in about 1% of the corpuscles in normal individuals. In this disease the percentage is over 10% and may be much higher. A characteristic of the red cells in the congenital type was found by Ribierre to consist in an increased fragility to hypotonic sodium chloride solution. Whereas the normal hemolysis begins at about .42% and ends at .32%, here it begins at about .55% and ends at .46% to .32%.

The test is made as follows: Into each of twelve tubes containing 1 cc of different dilutions of hypotonic salt solution carrying from .25% to .70% and labelled, one drop of whole blood is placed, and the tube gently shaken. After standing two hours at room temperature in the stronger solutions, in which no hemolysis has occurred, the unchanged corpuscles at the bottom of the tube will be overlaid with colorless salt solution. In the weakest solutions all corpuscles will have been hemolyzed forming a transparent red solution. In the intermediate tubes can be noted at which strength hemolysis begins and at which it is complete.

In the acquired type the auto agglutination test reveals a peculiar action of the patients serum on his own red corpuscles. The test is made by mixing one drop of the patient's red corpuscles washed, with ten drops of his own serum in a watch glass. If positive, after a few seconds the mixture shows agglomerated corpuscles on shaking and in a few minutes, a distinct pellicle sinks to the bottom which does not mix with the clear serum. This test is distinctive and not found in the familial or congenital type. (Krumbhaar).

### The White Cells.

The white cells are increased in number in the exacerbations, varying from the normal to 12 to 15,000, the polymorphnuclears being predominant and the small lymphocytes showing an increase.

### Urine.

The urine is high in color, is free from bile, except in the presence of a biliary obstructive complication and contains urobilin and urobilogen in most cases. There are traces of albumin not infrequently, no sugar.

### Splenomegally.

The spleen is much enlarged, a history of fullness and discomfort in the left hypochondrium may antedate the positive knowledge of its cause by many years. The size varies from time to time in the same case. It may extend to near the crest of the ileum and to the umbilicus. More commonly it is palpable to 8 to 10 cc below the costal arch. Exceptionally it is barely palpable. The border is well defined, the notch noticeable and the organ freely movable, firm and not tender.

In cases presenting much enlargement of the spleen the liver will be found also to extend below the costal margin.

### Fever.

Slight fever is present with acceleration of the pulse in the periods of exacerbation. The temperature curve has been observed to be similar to that in other anemias, notably pernicious anemia, ranging from 99 to 100 or more in the latter part of the day.

The pulse is soft, regular and weak. The blood pressure is below normal.

### Pathogenesis.

The results of splenectomy on the course of hemolytic jaundice have led to some interesting studies on the pathogenesis of this interesting malady. The splenomegaly, the hemolysis of the red cells, their increased fragility, the occurrence of jaundice, had raised important discussions as to the interrelation of these various conditions. Most writers have claimed that the hemolysis caused the spleenic enlargement. The influence of splenectomy on the hemolysis, the jaundice and the anemia, is now known from operated cases to be strongly suggestive of the splenomegaly acting as a factor of great, even if not of first, importance in the pathogenesis. This does not disprove the existence of a specific hemolytic agent having other than splenic origin. That such may exist is suggested by the fact now demonstrated, that increased fragility of the red cells is found to still be present in all cases apparently cured by splenectomy, and also in the small number of cases showing relapses even after the operation.

Pribram has reported researches on dogs, leading to a study of hemolysis resulting from congestion of the spleen. By producing congestion in this organ a urobilinuria resulted which he claims is a positive sign of abnormally increased destruction of red cells.

In extensive research by Banti with the agents of hemolysis, he states that the organs on which this class acts are the spleen most of all, then the liver, the lymph nodes and the bone marrow. In clinical hemolytic splenomegaly, four factors are at work; the agent causing hemolysis, the excessive hyperactivity of the spleen in the hemolytic process, the anemia and the jaundice both resulting from the hemolysis.

### Pathology.

In cases which have come to autopsy the effects of an hemolytic process have been found manifest by siderosis of the liver, spleen and kidneys.

Marked congestion of the spleen, especially of the pulp is present. The endothelial cells are full of iron containing pigment.

In the liver many cells are filled with large granules of yellow pigment, especially in the central lobules. There is no sign of cholangitis or biliary obstruction.

The cells of the convoluted tubes of the kidneys are the seat of moderate siderosis.

The spleen is always enlarged and may be five or six times the normal. The liver was found in the cases operated at the Mayo clinic, to be enlarged in a majority of cases.

### Diagnosis

The diagnosis of hemolytic jaundice in the light of the results of splenectomy for its cure, is most important. The fact that operations on the biliary tract have been done for an assumed obstructive jaundice, and the patients have gone on with their symptoms, including jaundice, should lead to a more painstaking care in the investigations toward ascertaining the cause of the jaundice. The very existence of jaundice suggests biliary pathology. It is therefore very important that this factor in a case be ruled out.

When it is remembered that in hemolytic jaundice there is no choluria, but only bile pigment in the urine, that the stools are still bile stained, that the jaundice is not attended by itching, that there is an enlargement of the spleen not commonly seen in obstructice jaundice, and that there is absence of pain or tenderness in the right hypochondrium, we may feel sure that we are dealing with other than a biliary jaundice. Cholelithiasis, however, may complicate hemolytic jaundice in which event the determination of an existing anemia, the increased fragility of the red cells to hypotonic salt solution, the history of a preceding and continuous milder jaundice, with evidence of biliary obstruction, will generally tend to permit of a positive conclusion as to the combination of the two affections.

The various so-called essential anemias which have some points in common with hemolytic jaundice are:

Pernicious anemia.

Splenic anemia.

The Splenic type of Hodgkins Disease.

Splenic Leukemia.

### Pernicious Anemia.

Pernicious anemia in its course frequently presents an icteroid skin which may resemble the disease under consideration and may present other points in common, such as enlarged spleen, marked anemia, rather high hemoglobin index, moderate fever, urobilinuria, variation in size and shape of red cells, progressive weakness, remissions in course; but in pernicious anemia there is absence of increased fragility of the red cells. The course too, is much shorter in pernicious anemia.

### Splenic Anemia.

The great enlargement of the spleen, the weakness, anemia and chronicity of splenic anemia should not be confounded with hemolytic jaundice, as there is absence of jaundice, the white cell count is low, hemorrhages are more common, there is no increased fragility of the red cells.

### Hodgkins Disease.

Hodgkins disease exceptionally presents with a very large spleen and little lymphatic enlargement with a moderate leucocytosis, and anemia; but there is no jaundice, no urobilinuria, no increased fragility.

### Splenic and Lymphatic Leukemias.

Splenic and lymphatic leukemias should not be mistaken for hemolytic jaundice as they present a hyperleucocytosis. The lymphatic glands are more or less enlarged, there is no jaundice and the course progessive.

Giffen calls attention to certain types of cirrhosis of the liver with jaundice which are not readily classified, the confusion being dependent upon a rather large spleen, jaundice, a blood picture of anemia. The presence of ascites in cirrhosis and the normal fragility of the red cells will help to differentiate.

Syphilis of the spleen may present a picture of other splenomegalies with anemia and weakness.

A case recently observed in the University of Nebraska Hospital, presented an enormous spleen, only slight enlargement of lymphatic glands, a moderate anemia and a leucocytosis of 14,000. An excised gland was found to be a hyperplasia, and a positive Wasserman led to an assumption of a syphilitic pseudo Hodgkins.

This was interesting in view of two cases referred to by Giffen, with similar very large spleens and slight lymphatic involvement, diagnosed as Hodgkins disease in one of which an excised gland proved the diagnosis. He does not state whether a Wasserman was done.

The differentiation between the congenital and acquired forms of hemolytic jaundice seems not especially important, yet there are some differences of note. The history of similar cases in the patient's family, the record of symptoms developing early in life, should be considered in relation to the congenital or familial type. It has been noted that the anemia of this form is usually less profound than in the acquired; the blood picture of the latter frequently being similar to that of pernicious anemia. There are greater variations in the intensity of the jaundice and the degree of anemia, the exacerbations being attended by a considerable rise in temperature and painful swelling of the spleen.

Differences are noted also in the blood picture between congenital and acquired hemolytic jaundice. The decreased resistance of the red cells which is considered to be distinctive of the congenital form is not found in the acquired when the test is made with unwashed corpuscles. Another difference is the characteristic auto agglutinative power of the serum which has been observed in cases of acquired hemolytic jaundice, and not found in the congenital.

### Prognosis.

The prognosis in hemolytic jaundice is rendered favorable by splenectomy, otherwise the course is extended over a period of many years with exacerbations and remissions rendering the patient a semi or complete invalid and terminating unfavorably. This applies more particularly to the congenital form. The acquired type is more severe of longer duration and in a few instances apparently complete recovery ensued. It may be early yet to assume a permanent cure from splenectomy but certainly all cases thus far reported, who survived the operation, have been symptomatically cured.

### Treatment.

Much has been written on the treatment of this interesting disease. Generally the hygienic, dietetic, and medicinal measures are those applicable to other forms of anemia, and necessarily vary with the course of the disease. There is no known cure unless it be by splenectomy.

Rest in the active periods, forced feeding, open air living, friction rubs with cool salt water, massage, will aid in nutrition and to an improvement in the superficial circulation.

Iron, arsenic and strychnia, will invariably be important adjuncts in raising the red cell count where this is low and directly affect the comfort and well being of the patient. As a preliminary to splenectomy all are important. X-ray treatment of the spleen has been resorted to in a number of cases with the result of effecting temporary improvement in the jaundice, anemia and vitality of the patient.

Complicating obstructive jaundice from gall stones or other cause, will require attention even to operation on the gall bladder for relief.

### Splenectomy.

That the cure of hemolytic jaundice by splenectomy in so far as the anemia, jaundice, ill being of the patient are removed is attested by the results in sixty-two cases in which the operation has been done, collected by Giffen, including twelve done at the Mayo clinic from June, 1911, to September, 1916, and two herewith reported.

The earliest recorded operation was in 1887 by Sir Spencer Wells, and reported twenty-seven years later as cured. Blaud Sutton's case operated in 1895 was reported well ten years subsequently.

Of twelve patients reported by Giffen from the Mayo clinic, ten were living, nine in good health without anemia or jaundice. There was one death following the operation. Four patients have been in good health for five and one-half years, twenty-three months, fifteen months and fourteen months respectively.

Both operated patients reported in this paper are well and free from jaundice, anemia or other symptoms, since date of operation in June and September, 1916, respectively.

That the operation should be advised in cases sufficiently ill to interfere with the comfort and activities of life must be accepted as warrantable. The proper time to operate is all important. A period of remission in symptoms including the jaundice and anemia, should be selected; and this opportunity may be encouraged by an outline of medical treatment heretofore referred to in the more active cases.

### Report of Cases.

Within the past two years it has been our privilege to study four cases of hemolytic jaundice, reports of which are herewith presented. Two were subjected to the operation of splenectomy; two were not. All but one of the cases are still under observation.

Case 1. Miss H., aged 25, was admitted to the Methodist Hospital at Omaha, April 26th, 1916, with a complaint of jaundice and inability to work on account of weakness. She was a domestic in a country town. Her father was 51 years of age, was said to have had rheumatism and had been jaundiced for the past several years continuously, and previously recurrently. Her jaundice had been attended by nausea and vomiting at times, but not with pain. Her mother at 47 has rheumatism of hands and feet with bladder symptoms. One sister at 28 is anemic with severe headaches and pelvic trouble. Two brothers 9 and 6 have had digestive troubles since infancy. The only death in the immediate family was a brother in infancy.

The patient had measles and pertussis at 7 and three different attacks of pneumonia in childhood. At 12 she had an attack of nausea, vomiting and dizziness followed by jaundice which persisted for several days. During this attack she experienced her first menstruation. Similar symptoms occurred with subsequent menstrual periods at irregular times, but jaundice was more persistent. Recurrent sick periods of several weeks to months duration have occurred to the present time, in which she would be jaundiced, have some nausea, occasional vomiting, be very weak, feverish and part of the time confined to bed. She states at her best, the skin is never clear, the jaundice varies very much, that she is always worse the more she is jaundiced. She has never had pruritus, is without pain, the stools not noticeably discolored. Palpitation and short breath have been noticeable for a number of years. She has been conscious of fullness in the abdomen and in the past year her waist measurement has considerably increased.

Menstruation is irregular, 4 to 7 week intervals, 3 to 6 days duration, painful, last period April 24th.

On examination the patient was distinctly jaundiced, the sclerae were yellow, the lips pale, pulse 90, temperature 98.4, respiration 20, teeth and throat in good condition. The heart not enlarged, a soft systolic murmur over precordium and neck vessels distinct, blood pressure 115 systolic, 90 diastolic, lungs normal.

The abdomen was prominent, the spleen much enlarged, the border extending to near the umbilicus and three fingers below the costal arch. It was hard and tender. The liver was not palpable, no tender points. There was no adenopathy. The muscles were soft, the hands and feet cold; no edema.

The blood count showed red cells 2,400,000, whites 10,500, hemoglobin 50%, marked anisocytosis, slight poikilocytosis, differential count; polymorphnuclears 72%, small mononuclears 17%, large mononuclears 6%, transitionals 2%, eosinophiles .2%.

The urine, specific gravity was 1020, contained a large amount of amorphous urates, no albumin, sugar, bile or indican. Urobilin positive.

The gastric contents after test breakfast showed absence of free Hcl, total acidity 24; lactic acid and blood negative.

The stool was of normal color and showed occult blood on the guaiac test.

She remained in the hospital under observation and treatment for three weeks with only slight improvement. The pulse was up to 100 most of the time, the temperature daily slightly under 100.

On May 10th, two weeks after admission, the red cells were 3,080,000, whites 12,000, hemoglobin 55%, occult blood was present in the stool on three examinations, urobilin in the urine constantly. She declined operation.

Three and one-half months after her discharge, during which time she continued treatment, she was re-admitted with the history that a few weeks previously she developed acute jaundice with chilliness, fever to 104 and diarrhoea, which continued for a week followed by a return to her former condition, though she had been too weak to do any work.

She was still slightly jaundiced, the spleen much enlarged. Between September 5th and 26th several blood tests showed an average of about 3,0000,000 red cells, 9,000 white cells, always anisocytosis. The coagulation time was eleven minutes on one occasion. The Ribierre fragility test of the red cells done by Doctor Sheperd showed an initial hemolysis to hypotonic sodium chloride solution at .60%, complete at .35%.

Splenectomy was done September 27th by Doctor A. F. Jonas. Temperature of 103 on the second day, 102 on the eighth were the only incidents of note in an uneventful recovery from the operation. On November 10th, two weeks subsequently the red cells were 4,600,000, whites 20,000, hemoglobin 75%. The spleen was three times the normal size.

A report from her physician recently, indicated complete recovery from all symptoms, including jaundice, a gain of 20 pounds in weight, that she was married two months ago and had moved into the northwest. Unfortunately a blood examination could not be obtained.

Case 2. Miss R., a nurse in training, aged 24, complaint of jaundice, weakness, inability to work continuously. There have been no deaths in the immediate family and no history of jaundice in any other member. She had pneumonia as an infant, typhoid fever at 16. At 8 years of age she had jaundice for some time. It has recurred several times each year since, the attacks becoming more prolonged,the previous two months constant. There has been no itching, the stools are normal, the urine high colored.

For several years she has tired easily, had palpitation, dyspnoea on exertion, swelling of the feet at evening. She is unable to work continuously on account of fatigue. There has not been nausea, vomiting or abdominal pain.

In the spring of 1914 her spleen was found by Doctor C. R. Kennedy to be enlarged. X-ray treatments at this time carried out for several months was found to give such relief to her symptoms of weakness and jaundice, she would be enabled to resume her duties. However, it did not have any effect on the size of the spleen.

An examination by Doctor E. L. Bridges early in 1916 showed marked jaundice with sclera involvement, systolic murmur over the precordium extending into the vessels of the neck. The heart was not enlarged. Pulse 84, weak. The spleen was readily palpable eight centimetres below the costal margin presenting a hard rounded surface. The liver was not enlarged.

The urine was free of albumin, sugar or bile.

On June 25th, 1916, the day previous to operation the blood examination showed red cells 3,826,000, white cells 7,200, hemoglobin 70%. Differential; polymorphnuclears 75%, large mononuclears 12%, small mononuclears 10%, basket cells 2%. There was considerable anisocytosis and some poikilocytosis. Previous blood counts had shown much variation in red cells up to 5,120,000 on one occasion.

Treatment extending over periods of many months consisting of iron, arsenic, salicylates, X-ray applications, rest, forced feeding, etc., had accomplished only temporary relief at best.

Splenectomy was performed by Doctor A. F. Jonas in the Methodist Hospital on June 26th, 1916, under ether anesthesia. This was followed by a stormy period of high fever, rapid pulse, pain at seat of operation, vomiting and chills, due to a complicating subdiphramatic abscess which was opened and drained by Doctor C. R. Kennedy on July 26th, one month after the splenectomy.

Of interest is the blood examination made July 10th, two weeks following the splenectomy, which showed 5,000,000 red cells, 50,400 white cells, hemoglobin 90%. Differential; polymorphnuclears 91½%, large mononuclears 27%, small mononuclears 7%. She made a rapid convalescence after the second operation and was discharged on August 10th, 1916. On this date the red cell count was found to be 5,088,000, white cells 11,000, hemoglobin 85%.

She has remained symptom free and has continued her vocation as a trained nurse to the present time. During the present month a blood examination was made when the red cell count showed 6,040,000, white cells 5,200, hemoglobin 70%, Tallquist. The fragility and autoagglutination tests were made recently by Doctor Riggert who reported hemolysis of the red cells began at .48% and was complete at .40%. The auto agglutination test was positive.

The urine contains urobiligen.

Case 3. A. F. R., aged 70, married, bookkeeper. Complaint: Intermittent periods of jaundice, weakness, dyspnoea on exertion, nausea and vomiting, interruptions of work during much of his life.

His father died at 64 of heart disease. Mother and one sister died of tuberculosis at 32 and 30 respectively. One sister died of dysentery in childhood, one brother is living at 80, a dyspeptic all his life but not known to have had jaundice.

He had dysentery at 5 years of age, seriously ill for two months. At 15 he began having attacks of nausea and vomiting with occasional pain in the epigastrium recurring at variable intervals for many years. At 40 jaundice appeared for the first time with one of these attacks which persisted for several weeks and was attended by chills and fever. From this time on he has had many recurrences of different intensity, frequently been laid up on account of debility, and his complexion has always been sallow. He was seen by the writer about fifteen years ago in consultation for the first time, when he was jaundiced, profoundly anemic and confined to bed for several weeks. Again two years ago he was attended in a recurrence when jaundice of quite severe type without pain or clay colored stools, anemia and fever were noted.

At this time a blood examination showed red cells 2,220,000, white cells 9,000, hemoglobin 70%. Differential not made. The spleen was found to be considerably enlarged. He was laid up for several weeks when the jaundice gradually cleared up. He has been able to continue his work since.

Opportunity for a recent examination was afforded. The patient has many decayed teeth and old roots. The skin is off color but not distinctly jaundiced. The conjunctiva is slightly tinged yellow, the lips pale. Temperature is 97, pulse 86. A faint systolic murmur is present over the upper sternum. The heart not enlarged. The spleen extends to ten centimetres below the costal margin, not tender. The liver dullness is normal, not palpable.

The urine is normal except that the test for urobiligen is decidedly positive. The blood examination showed red cells 3,680,000, white cells 8,000, hemoglobin 70%. The fragility test of the red cells to hypotonic sodium chloride solution made by Doctor Riggert indicated commencing hemolysis at .60% and complete at .50%.

Case 4. H. G. R., single, aged 38, clerk, son of Case 3. Complaint: Jaundice with epigastric pain, debility, dyspnoea on exertion. His mother is well, with unimportant history. One sister died at 8 years of age with spinal meningitis.

He had measles and whooping cough in childhood, when 18 years old he was jaundiced for a month, accompanied by pain in the epigastrium and clay colored stools. The jaundice has recurred in periods of from two months to two year intervals ever since, occasionally but not always attended by pain in the epigastrium. The stools have been noted to be clay colored in some of the attacks. His color is always sallow. He has been easily fatigued for years, is short of breath on exertion. Complains some of dyspepsia but never has vomiting and seldom nausea. There have been no hemorrhages.

In October, 1915, he was seen by the writer, three weeks after onset of jaundice. He was still yellow. Temperature 97.4, pulse 90 weak. A systolic murmur over precordium was distinct. Heart not enlarged. There was some tenderness over the gall bladder, the liver not increased in size. The spleen extended to ten centimetrs below the costal arch, was soft, not tender.

The blood examination at this time showed red cells, 4,690,000, white blood cells 15,900. Hemoglobin 85%, moderate anisocytosis, few irregular shapes. Differential not made. The urine was negative, though urobilin or urobiligen tests were not made.

There was slow improvement in his general condition with decrease of jaundice. He had a recurrence of all symptoms with deep jaundice in August, 1917, under observation of Doctor Hollister, when the spleen was noticed to be much enlarged, there was absence of pain and gall bladder tenderness.

Again improvement ensued and he has remained free from active symptoms to the present time,being able to continue his clerical duties. He was recently examined by the writer. The skin is sallow, the conjunctiva slightly yellow, mucus membrane pale. A systolic murmur is heard over the heart, transmitted to the neck vessels. The spleen is very large, reaches the middle line and within six centimetres of the crest of the ileum. It is hard, not tender. There is no change in the liver dullness, no sensitiveness to pressure over the gall bladder.

The blood examination shows red cells 3,640,000, white cells 4,400, hemoglobin 60%. Differential count; polymorphnuclears 79%, small mononuclears 9%, large mononuclears 10%, transitionals 2%. The Ribierre fragility test made by Doctor Riggert of the University Hospital indicated commencing hemolysis at .62% and complete at .52% to hypotonic sodium chloride solution. The urine was free from bile, but indicated a strong urobiligen reaction.

### Comment.

These cases certainly present the characteristic course, physical and laboratory findings of hemolytic jaundice.

Cases 1, 3 and 4, were considered to be of the familial type and Case 2 of the acquired. The clinical course of the latter case was much less severe than is reported to be usual with this type, but the absence of any similar case in the family history and the auto agglutination of the patient's red cells by her own serum, left no room for doubt if we are to accept this as of diagnostic importance. Of interest too is the fact that the test is positive in this patient one and one-half years following splenectomy and corresponds to the decreased resistance of the red cells to hypotonic salt solution in which it has been found to persist after splenectomy in the familial type.

Case 3, the patient now 70 years of age, and still following his occupation as a clerk, developed his first attack of jaundice at 40 years of age and can not recall a similar case in the family history. The marked fragility of the red cells even in a state of comparatively good health for him, and the fact that his only child has a similar complaint would place his case in the familial or congenital type. His earlier history points definitely toward gall bladder disease.

Case 4, undoubtedly had an obstructive jaundice complication, probably gall stones as a part of his recurrent attacks in some instances, as the abdominal pain, clay colored stools and choluric urine had been noted. In fact our first records in his case indicated this as a probable diagnosis. Only after further observation and study were we aware of an additional important factor in his case.

Wassermen blood tests were not made on any of these patients. There was no history of syphilitic, infection, no symptoms suggesting syphilis, and the diagnosis of hemolytic jaundice led to a probable exclusion of syphilis as a factor, for as Giffen states, while, "syphilis of the spleen may simulate the clinical picture of any of the other forms of the splenomegalic syndrome," he has not known of an instance in which the exact combination of course, symptoms and laboratory findings, has been reproduced by syphilis. In his series of thirteen patients tested, the Wassermann was negative in eleven and positive in two.

The successful results from splenectomy in cases 1 and 2 are in line with the sixty cases collected by Elliot, Knavel and Giffen. There can be no question of the value of splenectomy in hemolytic jaundice and in splenic anemia. Can the same be said of splenectomy in pernicious anemia? Our own observations are not reassuring. May not some of the successful cases reported belong to either of the former groups, rather than to pernicious anemia?

### References.

Thayer and Morris. Two cases of Hemolytic Jaundice with Splenomegaly. John Hopkins Hospital Bulletin 1911-22 85-96.

Krumbhaar, E. B. Classification and analysis of clinical types of splenomegaly accompanied by anemia. Am. J. M. Sc., 1915, 22, 245.

Giffen, H. C. Hemolytic Jaundice. A review of seventeen cases. Surgery, Gynecology and Obstetrics, 1917, 725, No. 2, 153-161.

Pebram. Wein. Klin. Woch. Oct. 2, 1913.

Banti. Semain Medical. July 2, 1913.

Richards and Johnson. Journal A. M. A., Nov. 1, 1913.

Gaisbock. Duet. Archiv. f. Klin Med. 1913, cx5-6.

Mosse. Berlin Klin. Woch., 1913, No. 15.

Micheli. Berlin Klin. Woch., 1911, No. 36.

### Discussion.

**Dr O. E. Liston, Lincoln.**—It is not possible at this time to make a distinct classification of that group of diseases characterized by a greatly enlarged spleen, some degree of anemia of the secondary type, with changes—particularly of the red cells, and with or without an enlargement of the liver, associated with jaundice at some time during the course of the disease. Nor is a classification of importance as regards treatment. I think it is conceded that splenectomy offers the best chance of recovery, or at least of an alleviation of symptoms, particularly in splenic anemia and hemolytic icterus.

However, some of these cases are not good surgical risks. We have under observation now such a case—a boy of twelve, with a significant family history. He has been ill two and one-half years. He has been constantly jaundiced during this time, with periods when the jaundice is greatly increased. When seen his skin was deeply pigmented; he had a temperature, digestive disturbances, and was very weak. His spleen was greatly enlarged. His liver was two inches below the costal border. His urine was very dark and gave a positive reaction for urobilin. There was bile in the stools. His blood count showed 2,300,000 reds, 5,000 whites. There was a marked irregularity in the shape and size of the reds, and much polychromatophilia. There was a marked decrease in the resistance of the red cells to the hemolytic action of hypotomic salt solution, hemolysis beginning in .65 per cent solution and being complete in .3 per cent solution. The hemoglobin percentage was 25.

We considered this a case of hemolytic icterus and felt that it was inoperable. We have thought deep roentgen therapy might help some, and have administered two treatments through ten portals of entry over the enlarged spleen. His spleen now, three weeks after beginning treatment, is considerably reduced in size. He feels much better, and is stronger. The hemoglobin percentage is now 35, but the red cells have not increased in number though there are fewer abnormal reds. Whether he is passing a crisis and getting better, as these cases do, or whether the roentgen ray is affecting him kindly, I am not now in position to say, but hope to be able later to report the results.

## Medical vs. Surgical Treatment of Gastric and Duodenal Ulcer.*

J. M. Mayhew, M. D.

In the past few years more acute clinical observation and more exact laboratory technique have rendered the diagnosis of ulcer common. Dr. F. C. Shattuck of Boston speaking before a meeting of the Johns Hopkins Medical Society in January of this year on the theme "Cinq Ans Apres" notes this fact keenly. He says: "I was formerly quite accustomed to the nearly constant presence in my female ward of several cases of gastric ulcer, almost invariably with the clinching evidence of hemorrhage. These almost always did well under purely medical treatment unless there was distinct pyloric stenosis. I now find a decidedly larger number of cases in the male ward, often sent in for such study as the slender purse cannot afford outside of the hospital." Any one revisiting a hospital after twenty years absence would be astonished to see the increased number of cases of ulcer. This is undoubtedly due to advanced diagnostic procedure in which bacteriology, chemistry and roentgenray have all played their part.

---

*Read before The Nebraska State Medical Association, Omaha, May, 1918.

The question which presents itself to each of us is, "what procedure shall we undertake for the cure of the condition? Shall it be surgical or medical?" The long continued rest in bed with the careful, close, accurate attention necessary for the medical treatment of gastric ulcer appeals, as a rule, neither to the physician nor the patient.

George W. Crile speaking before the Medical Society of New Jersey in May, 1917, remarks: "If the patient possesses the necessary spiritual and financial qualifications, then a fair trial of non-surgical treatment should be made." However, he states frankly that he believes that surgical results are due largely to the physiologic rest and alkalization of gastric content.

The rapid, brilliant and immediate result of surgical procedure appeals strongly and seems on the face of it to offer the better solution of the problem. It is, however, well to pause and consider lest one may be swinging wildly on the horn of a certain and positive dilemma in accepting immediate result without considering the end result and ultimate condition of the patient.

Statistics will give us some basis upon which to decide our methods of procedure. Richards in Northwest Medicine, 1917, gives the following statistics of the medically treated cases: "25% of the medically treated cases later showed some return of former trouble and still have to remain on a careful diet. 25% are apparently cured at the present time. 50% were only temporarily if at all improved, and 40% of these returned later for operation. Mortality of medical treatment, nil."

Of the eighty-five cases reported, fifty were treated surgically.

Twelve per cent of the operated cases had had previous appendectomies and in 4% the gall bladder had been either removed or drained. In 50% appendectomies were performed by Richards in addition to gastroenterostomies either on account of combined history of symptoms or for definite macroscopic pathology.

The surgical treatment consisted of a posterior gastroenterostomy in all cases except seven perforated ones.

The average time that these patients remained on a prescribed diet and medicine following operation was three months.

### Results in Surgical Cases.

Eighty-five per cent of cases report very satisfactory results from the combined surgical and medical treatment. Five per cent have had some return of symptoms and have had to resume restricted diet for short periods. Two cases report no improvement in symptoms after one year. Two of the operated cases died, one of typical pernicious anemia six months after operation. The other died of double lobar pneumonia four days after operation. He was an alcoholic and gave a positive Wassermann test."

In 1899 Joslin collected 114 cases of ulcer treated medically and found that 80% were cured at the end of treatment but after five years only 40% had remained well. In 1914 in the Journal A. M. A. another series of cases was published, 131 in all with the following result: cured 39%; improved 42%; unimproved and died 19%. Herbert S. Carter traced the records of the Presbyterian Hospital a few years ago and reports in the American Journal of Medical Science, December, 1917: cured 50%; improved 12%; unimproved and died 38%. All of these cases treated medically showed a fair degree of success, 40% for the combined series of 263 cases. He adds, however, that there were included in this number, cases of chronic appendicitis or gall bladder disease, either of which can perfectly simulate ulcer, but granting that one-half the cases were wrongly diagnosed we still have 20% of cures, or one-fifth of the cases and it is probably higher than that—30% to 50%.

Surgical end results: Joslin reports 82 cases of chronic ulcer treated surgically with these results: cured 47%; improved 19%; unimproved and died 34%. In the Journal A. M. A., August, 1914, Peck reports seventy-four cases of duodenal ulcer from the Roosevelt hospital. Of these 68% were cured; improved 7%; unimproved and died 8%. Kuttner reports 1100 cases treated surgically, showing 65% cured. Presbyterian Hospital records of thirty-one cases treated by

Carter showed cured 64%; improved 19%; unimproved and died 19%. In American Surgery, 1915, Martin and Carroll of Baltimore report 45% in gastroenterostomy and advised pylorectomy. Carter states that the surgical statistics for a combined series of 1285 cases are 64% cured surgically as compared with 20% to 40% cured medically. One cannot fail to be impressed with these statistics especially as Crile stated in the address mentioned that the operation is perfectly safe, mortality rate is below 3% and for gastroenterostomy alone it is less than 1%.

For some reason that I am not able to discover my own end results do not compare with the results noted above. I have succeeded in tracing out of a series of 218 cases treated by me in the last fifteen years in 114 cases the time since treatment varies from 15 down to 3½ years, an average of 6½ years. Of these 114 cases sixty-eight were treated medically, forty-six surgically and of the forty-six cases treated surgically twenty-two had the advantage of a preoperative, dietetic treatment. In the surgical series, appendectomies were performed in 32% at time of operation and had previously been performed in 7% of others.

My end results from the report I have received are as follows: Cured (medically) 54%; improved 38%; failure 8%; no deaths. Surgically cured 41%; improved 50%; unimproved and died 9%. This difference in end results cannot be ascribed to any particular method of treatment. I will not attempt to discuss the method as I believe that that has been sufficiently covered and statistics are available to direct one to the method best adapted to his own use. The fact that I noted in this series is that a slightly better percentage of cures shows itself as a result of medical than surgical treatment and my own experience has been that convalescence and improvement after surgical treatment occupies as long a period as the entire course of medical treatment. I have also noted that the internist is usually required to devote the same care and the same attention to exact detail in securing a permanent cure after surgical treatment that he does in following out a course of medical treatment. Notwithstanding the fact that surgery is appealing strongly for despotic rule in the treatment of these conditions I feel that full sway cannot be granted from the demonstration of end results.

It is apparent from the risks of surgical procedure and the lack of consistent method that surgeons themselves are not so sure of their ground as they might be. Fuhlhaber and von Redwetz state that mere gastroenterostomy is followed by many complications and Mayo states that where the pylorus is left open much of the food passes out through the pylorus instead of through the new opening. Sir John Bland Sutton protests that gastroenterostomy is inefficient with a patent pylorus. This can be demonstrated by means of the roentgenray to the satisfaction of any one. The liability of jejunal ulceration must be considered on the other hand, when the pylorus is closed. This leads to a jejunal ulcer in place of the one operated upon. Moynahan states that when the ulcer is small its scar may be inconspicuous and offer no obstacle to the escape of food. The pylorus then transmits all or much of the stomach contents. The ulcer is subjected to renewed irritation, breaks down and the symptoms recur. Connell reports numerous cases with the remark, "temporary improvement and the return of the original complaint." Rodman regrets that "while patients make operative recovery they are not cured." Granting that the surgeon is conscientious in his work and in his reports of end results, I believe that there is a lack of uniformity in operative procedure for this condition. It is evident that sufficient care is not exercised in the individual case to determinate the end result.

There are many reasons why surgical failure is so marked, among them I believe the following to be the most serious faults in the surgical procedure:

1st. Relying on the simple operation of gastroenterostomy to perform a cure in all cases.

2nd. Overlooking the possibilities of preliminary jejunostomy as advocated primarily by von Eiselberg and later by Crile and Barr in all cases of serious starvation, the main operation being delayed until a safe margin of vitality has been established. This allows for resection at a period when safety to the patient is more marked and when vitality, increased by feeding, has already performed partial cure.

3rd. The failure of removal of septic foci, particularly those of the mouth and pharynx.

4th. The failure to remove infected appendices and to drain infected gall bladders at the time of the original operation.

5th. The ignoring of that small percentage of gastric ulcers caused by syphilitic infection. Two in my own series would have escaped operation had a routine Wassermann been made.

6th. Ignoring hemorrhagic cases in which a preliminary blood transfusion would stop hemorrhage (Crile, Bernheim), and allowing the patient to be presented as a superior operative risk with greater degree of safety. (Bloodgood). This holds partly true for that class of case, called (Hale White) "gastro staxis" which undoubtedly has an association with the hemorrhagic diathesis in which surgery per se has no place whatever.

7th. The lack of pre-operative dietetic regime, post-operative observation and dietetic treatment extending over a period of at least one year.

In my own experience it has not been an uncommon occurrence to find patients feeling so well after gastroenterostomy that they regard themselves permanently cured and go out from their operative convalescence and eat anything and everything that may be offered them. This is essentially dangerous and will invariably result in a recurrence of gastric or duodenal ulcer or in the formation of jejunal ulcer. Carter in his classic article in the American Journal of Medical Science, December, 1917, closes by stating "all cases of gastroenterostomy should be given, post-operative, a regular ulcer diet. Every opportunity for healing and cicatrization should be given, involving weeks or months during which time the diet should be bland, soft and free from all thermal, mechanical, or chemical irritants. Too much stress cannot be laid on the importance of the food and drink factors in the attempt to attain perfect results."

### Conclusion.

1. The conflicting statistics showing the balance between medical and surgical treatment are such that one must conclude that method is largely responsible for the failures in both forms of procedure.

2. Extreme caution in diagnosis and care is essential for outlining proper procedure.

3. Post operative dietetic care and observation extending over months is necessary with any procedure selected.

4. Under present methods medical treatment of ulcer achieves as equally permanent end results as does surgical treatment and will continue to do so until the conditions outlined above are complied with.

## The Radical Operation for the Treatment of Acute or Subacute Peritonsillar Abscess.*

Henry B. Lemere, M. D.

The etiology of peritonsillar abscess or quinsy is generally an extension of an infective condition in the tonsil itself. There are however, I am convinced, several cases which result from a pus condition so often found around the last molar. The tooth is often only partly erupted and the overhanging tissue forms a pocket subject to trauma and liable to harbor infective material. This is carried by the lymphatics or blood stream, to the tissues surrounding the tonsil, and when pus forms the abscess cavity points or is formed in the loose tissue around the tonsil. I will report a case in point.

Case 1. A medical student was reported suffering from quinsy. Examination revealed an abscess extending from immediately in front of the third molar to the peritonsilar space. The abscess was pointing immediately in front of the third molar. The gums partly covered the biting surface of the tooth and the swollen and infected gum formed an infected pocket, which seemed to me undoubtedly the source of infection. This tonsil was removed according to the method to be described later and the tonsil on the other side by the Beck method. There was an uneventful recovery except that the maxillary glands immediately below the infected tooth were swollen for two days.

In regard to treatment of quinsy all seem agreed that the abscess should be opened and various landmarks and guides are given in the text books to enable the operator to locate the pus. Ballinger however counsels the operator to proceed as in a tonsillar dissection making an opening between the anterior pillar and the tonsil and dissecting back behind the capsule until the pus is reached.

Peritonsillar abscesses vary in their position, and no guide will be of use in the atypical cases. The peritonsillar tissue, in cases which have had many abscesses, is found when the tonsil is later removed to be merely scar tissue attaching the tonsil firmly to the muscular tissue forming its bed. In such firm tissue the abscess does not take the form it does in the normal loose tissue surrounding the tonsil.

---

*Read before the Nebraska State Medical Association, Omaha, May, 1918.

There is another atypical form of abscess in which the pus slowly or periodically leaks between the tonsil and its pillars or through the tonsil itself and there is at no time a distended abscess cavity into which an incision could be made.

Ballinger's method alone will reach these atypical abscess cavities in the greater number of cases, but in employing it, it has often been necessary in my cases to give a general anesthetic.

Several years ago it occurred to me that it was surely foolish when the patient was under ether and already had the tonsil half dissected out not to complete the operation and enucleate the tonsil. I did this in several cases with the happiest results. The throat healed normally and was little if any more sore than after an ordinary tonsilectomy, or than it would have been if I had stopped when I had reached the abscess cavity. I inquired in the clinics abroad if an enucleation was ever attempted during quinsy and I was warned against the dangers of such a procedure though I had never been able to find any one who had seen them materialize as no one had ever done the operation. I find in no text book any recommendation or condemnation of the operation; it simply is not mentioned.

On the day however on which I was to present this paper my attention was called to an article published December 30, 1915, in the Boston Medical and Surgical Journal by Dr. Harry A. Barnes in which the ideas given in my paper and which I thought original are given in a much fuller and more convincing manner. The article is named "The Radical Treatment of Peritonsillar Abscess by Tonsillectomy During the Acute Stage of the Disease."

I have done the operation several times and with never any but the happiest results. Following is a case report:

Case 2. Patient has suffered for over two weeks with a sore throat which finally caused a swelling under the jaw which was opened by a general surgeon and discharged pus, he also made an incision in the throat; the patient however remained septic and when I saw her she was profoundly septic with rapid pulse and respiration. The throat showed a peritonsillar swelling with an incision over the most bulging portion but not pus draining. The case seemed to me in desperate condition and demanded immediate relief. The patient was put under ether and the tonsil dissected out. When half way through the operation pus was reached. This was aspirated by the suction apparatus which was taking care of the blood. There was immediate lessening of septic absorption and the case went on to uninterrupted recovery.

The operation varies only slightly from the ordinary technique. The pillars and tonsils are generally massed together but under a good light with careful dissection they can be separated. As soon as I reach the abscess cavity I proceed by finger dissection and complete the operation with a snare. The bleeding during the operation is but little more profuse and stops sooner than in the usual operation.

Many men I am convinced see the advantage of removing the tonsil when they have already done half the operation, but they are afraid because the operation lacks the endorsement of the profession; I have done the operation many times and there has never been any signs of general or local infection. In conclusion the advantages are:

1st. No possibility of any more attacks of quinsy.

2nd. Slight if any prolonged convalesence.

3rd. Complete drainage, even with atypical and partially collapsed abscesses.

The operation is suggested only in certain cases and never unless with the assistance of complete hospital facilities including suction apparatus.

### Discussion.

Dr. A. R. Knode—I want to speak about Dr. Lemere's paper. Personally I have used the Ballinger method of opening a tonsillar abscess almost entirely. I had one case, as Dr. Lemere suggests, in which the result was very favorable and the time of healing very much less than the usual method of opening tonsillar abscesses. The method seems to be rather radical because most of us have never attempted it. However, I have a report of one man who has operated on fifty-eight cases. His method is to dissect around the tonsil to the abscess, and then remove the upper third of the tonsil. Why he leaves the rest of it I do not know.

Another author suggests a unique idea of the removal of the tonsils in acute tonsillitis, and reports five hundred cases so treated. He is enthusiastic about it.

One of the advantages of Dr. Lemere's treatment is the operation can be performed much sooner than you would do in the ordinary treatment of tonsillar abscess, in that you do not have to wait until you are sure of locating the pus. If you take the tonsil, you know you will get the seat of the trouble and shorten the course at least by two days.

The question as to the removal of the other tonsil is interesting. I believe if you are going to go into a radical procedure, you might just as well take the other tonsil at the same time. I have read an interesting paper by H. A. Barnes of the Harvard Medical School on this subject. He has performed this operation in a number of cases, and recommends it very highly. He is a man of a great deal of experience and his word carries a good deal of weight. His experience has been the cases so treated get along much better than by the usual method of opening.

I feel that in selected cases this method is a good one. Of course in an abscess that is a big, bulging affair, practically closing the throat, where you would be sure of getting pus by the simple incision, it would be folly to remove the tonsil at the same time.

**Dr. F. F. Teal, Lincoln.**—I did not hear all of Dr. Bushman's paper, but what I did hear impressed me very much. There was a period when the term "diseased tonsil" was used, that nobody knew what it meant. I think Dr. Bushman has given the best exposition of a diseased tonsil I have heard.

Dr. Owen in his discussion has described well how to detect that diseased tonsil. Now, what to do with those diseased tonsils? When my patients ask me, I tell them I only know of one method, to get rid of them.

The doctor raised the question of a prophylaxis. If you could sweep out every crypt with a solution of silver nitrate, you would have a clean, healthy tonsil. The trouble is you can't get all the crypts.

So far as goiter as a result of tonsil infection is concerned, I do not believe there is much in it. I do believe there is one class of goiter cases that might be due to tonsil infection. I refer to the enlarged thyroid in young girls; and I have seen them reduced in size following tonsillotomy, where there was undoubtedly tonsillar infection.

Dr. Bushman did not touch on tubercular infection. We should be a little cautious in sizing up our patients when they come to us for operations. I have been charged twice in the last year with hastening a patient along the down-hill road when I took out the tonsils of a person who died afterwards of tuberculosis. I think we ought to be cautious not to take out tonsils in those cases. They will possibly die, and you will be charged with their death.

In regard to the treatment for quinsy—I see only one objection to Dr. Lemere's procedure. A doctor in New York had a personal experience of five cases of pneumonia resulting fatally following tonsillectomy. He gave as the cause the inspiration of septic material from the crypts during the operation. It seems to me that if the tonsils were infected and the patient under an anaesthetic, you are liable to get infectious material into the bronchia and lungs. I still prefer the old method of excising the soft spots rather than going behind the pillar, as suggested by Ballinger. In some cases the tonsil seems either to adhere again or there is not sufficient drainage. It is more difficult to reestablish an opening in those places than an opening in front of you where you can get a probe and reopen the abscess in case it closes. You all know one of those incisions will close in twenty-four hours, and you have to keep it open. My quinsy cases do not last more than a few days.

I don't see any use of leaving a part of the tonsil. If you have to do an operation later and take out that other portion, why not evacuate your abscess in the old way and go back for the whole tonsil later?

I think that is all I have to say.

**Dr. G. I. Sellon, Broken Bow.**—Frequently, I think we are too prone to take into consideration the history of the patient in determining the condition of the tonsils. We have all seen striking examples of where we have been misled by the history of the patient.

If you will pardon a mention of a case: Mr. A. came to me April 1st, 1916, stating that his son eighteen years old had been in bed with inflammatory rheumatism almost continuously since the preceding September. Routine treatment for the condition had given no appreciable relief. I questioned the father closely about teeth and tonsils and he said that both had been examined carefully and pronounced O. K. He also stated very positively that the boy had never had any tonsilitis. A day or two later he brought the young man in. Casual examination did not show bad looking tonsils, but rather a full throat. However making traction on the tonsil revealed a big bulging the size of a walnut beneath the pillars.

The tonsils were removed and the father reported to me the latter part of April that the boy was listing corn and appeared perfectly well except that he had not regained his lost weight and strength entirely. I have recently seen the boy and he has not had a sick day since. Doubtless the negative history in this case had much to do with the condition of the tonsil being overlooked.

In regard to the radical removal of the tonsil in quinsy: I have failed many times to get proper drainage opening through the anterior pillar and of late have been opening mostly between the anterior pillar and capsule, and have frequently wondered how much more danger there would be in simply going on around the capsule at that time.

I am glad indeed to have heard Dr. Lemere's discussion of this subject.

**W. L. Dayton, Lincoln.**—I think I noted in Dr. Bushman's paper a current of conservatism which I admire. I think we have gone perfectly daffy on this matter of taking out every tonsil we see. I believe it is a mistake, and especially so in young children. Only for mechanical reasons is it warranted in the very young. Dr. Bushman has elucidated in a very reasonable manner points about the disease and the methods; but the best method in my mind is to make from the secretion that you get from the tonsil a culture, and examine for certain bacteria, and especially if you find the S. viridans, then it is quite essential that the tonsil be removed. There is a tendency now among a great body of excellent men towards conservatism in this matter. It is just becoming evident, as those who attend our special meetings of the larger societies have discovered, perhaps, by this time.

The methods of the operation of course vary. But the only way is to take out, especially in those over the age of puberty, the entire tonsil tissue. Now if the tonsil has a function, it has it evidently in the younger life—during childhood—and for that reason it may be a mistake in all cases of small children to remove every vestige of tonsil structure. How many of you have examined for a pyogenic membrane in tonsils after they have been taken out? Very seldom do you find any. Men who are versed in histology, pathology and bacteriology search for it, but they do not find it only in exceptional cases. Our colleague from Pawnee City said we have other foci of infection. There is no question but that local foci cause systematic disturbances; but the fact that the tonsil causes all of it is erroneous, in my belief. While I am obliged to do a great many tonsillectomies, I operate only when I am convinced the tonsil is diseased or after repeated attacks of tonsillitis or hypertrophied tonsils. Often even then I have a culture taken to determine the character of the secretion. While those crypts do contain detrilus and degenerate, yet Nature forces them out ordinarily, unless the pillars are wrapped about them and the tonsil submerged. If submerged too much, they retain the detritus from the food and become foul and offensive. I just simply wish to call your attention to the fact that it is not a simple operation—a proper tonsillectomy. It is both difficult and dangerous, and should be done carefully under as rigid asepsis as possible, with a great deal of care as to the future, and the immediate future, of the patient.

Now while here I wish to speak of a method of mine which has prevailed ever since we have been taking the tonsils out. It is the application of a 12 per cent nitrate of silver to the surface after the tonsil has been removed. I use a 25 per cent solution of tincture of iodine—reduced to about 25 per cent by alcohol—first, and then use the nitrate of silver. By this means I get an albuminate over the raw surface, and it is very seldom we have a hemorrhage. It is a little slower in the healing, but it is safety, and "Safety First" is the slogan nowadays. It acts both as an anti-septic and a preventive of hemorrhages.

With reference to quinsy, I consider Dr. Lemere has attacked that with considerable boldness. I must confess I would hesitate before I made an inoculation of a tonsil in its acute, inflammatory state, which always accompanies the quinsy. The tonsil tissue itself is more or less involved. I consider the older method of making an incision in the velum palati is preferable. While the method of Dr. Lemere in his hands might be eminently correct and successful, yet we might have an inspiration of pus, as mentioned by Dr. Teal, and an infection of the lung, or something of that kind, that would cause death. All of those things we want to prevent, if possible. One of our eminent men in this society years ago died from a spontaneous rupture of the peri-tonsilar abscess and choked to death. Now the amount of secretion contained in some of these abscesses is tremendous, and that must be taken into consideration. It is true we do not always find the pus at the place where it is supposed to be usually found. It sometimes is found in the rami of the jaw. I have had a couple of cases of that kind that have caused me no little worry in order to get out the pus, and required an anaesthetic in order that a proper dissection might be made.

I do not wish to condemn something I have never tried, but I do wish to say that to my mind it is a dangerous procedure. Is it surgically correct to operate radically upon an acutely inflammed tonsil in the presence of pus in the form of an abscess? That is the question. Is it good surgical technique and sense to do it? I am not commenting on Dr. Lemere's want of judgment, but we must think of those things seriously before we offer it to our patients.

I think I have consumed my time. The subject is so great one could ramble along for a long time.

**Dr. W. R. Boyer, Pawnee City.**—This is an important paper not only for those interested in special throat surgery, but concerns us all, and especially those of us who are in general practice and dealing with people who are sick.

A few years ago, a well known internist from Chicago read a paper before this association meeting here in Omaha, in which he advanced the statement that a large percentage of chronic diseases were due directly to a blood infection from absorption of residual pus. A focal infection.

Up until that comparatively recent period, little had been said or written regarding such a possibility and his statement looked pretty broad especially as he stated that not only arteriosclerosis but chronic interstitial nephritis, pernicious anemia and other irremedial diseases belonged in that list.

A year or so later, another prominent man, a pathologist from Kansas City, in the course of a paper on acute suppurative nephritis, corroborated this statement and went farther with his opinion that the succeeding ten years would develop the fact that 90% of the sources of infection were from the mouth, that is from the teeth or tonsils.

From a surgical standpoint, I believe all diverticulae are a constant source of danger, be it a gall-bladder, appendix, fallopian tube, tonsil crypts, nasal accessory sinuses or other mucus cavity having but one opening, and that into an infective field with the possibility that the one orifice becoming blocked may give rise to an acute abscess formation. It has now become just as positive that they may become infected without complete atresia of the outlet, with relief from local conditions partly from drainage and partly from absorption and consequent blood infection and resultant systemic disease.

Why we have tonsils I do not know. I do not know of anyone who does know. There are a number of reasons offered for their presence but what physician of any experience has ever seen a child of 3, 5, 7 or even 9 years of age deteriorated physically or mentally as the result of their removal. I repeat what you have all witnessed, little chaps with enlarged tonsils without disease, who were slow mentally, with capricious appetites, restless sleep and every other thing which goes with malnutrition, after tonsillectomy changing from the condition described to that of good appetite, sound sleep, growing, enjoying their school and play and learning as other children do.

I see no reason for having these big tonsils. I see no reason for waiting for them to become diseased for I do not know where to draw the line. Where one sees from 20 to 30 children operated daily as is done at Cook County Hospital, he must conclude that it is beneficial or they would not continue to do it.

I think every doctor should know how to remove these tonsils in children. In our little place we operated some ninety-five children last year. Not one of these parents, some of whom were skeptical as to the promised outcome, but who are more than ready to admit it now.

We do meet skeptics with regard to this. A year or so ago a prominent merchant of our town accosted me on the street and in a crowd said, "Doctor, if tonsils are no good to children, what were they put there for?" It was at a time when there were plenty of flies so I said to him, "I do not know but if you will tell me what these flies were put here for, I will try to tell you about the tonsils." He stammered around attempting a reply when I said, "Fred, I will ask you something easier. I will name twenty men in this town and if you will tell me what they are here for, I will tell you about the tonsils and appendix both." (Laughter).

**Dr. C. P. Fall, Beatrice.**—These papers would serve this society better, probably, if read before the Medical Section. The discussion and papers remind me of the different stages we went through with appendicitis. It was the custom a few years ago to open the abdomen and evacuate the pus, and go after the appendix later. It seems to me Dr. Lemere has taken a step in advance, and we ought to encourage him.

I notice the criticism about the inspiration of pus in operating, but I notice Dr. Lemere made the point that was met with a suction appartus to prevent the pus from going down and drowning the patient.

The question has been raised as to what the prevention would be for these throat infections. I want to make a statement which possibly is in advance of the modern trend of thought at the present time. Feed your babies right the first eighteen to twenty-four months of their lives and they will not have these troubles. See that the baby is getting the proper quality as well as quantity of milk from breast fed as well as artifically fed and prevent the intestinal infection the first eighteen months and you will not have the secondary infection of the tonsils you have spoken of. It has been my custom the last five years to determine whether the baby is getting the proper quality and quantity and I know these babies grow up and haven't diseased tonsils and adenoids other babies have. I believe that will stop a great deal of the surgery—the necessity for surgery of the tonsils which we are doing at the present time.

If you use the method the last speaker has mentioned it will be a great help. There is no question about it.

Our friend from Pawnee seems to have the impression we do not know the function of the tonsils, and some might think they have no function, as they think the appendix has no function. There is no question the tonsils have a great function, and especially in children. Some good authorities claim no child should be operated on unless at least five years old.

**Dr. J. N. Plumb, York.**—There are a few things I think we ought to impress upon ourselves. The men doing special work are trying to be modest, and I think they are. We cannot by modesty impress the general practitioner with the idea there are some things he ought not to do and cannot do well. I believe the general practitioner has it in his head he can remove tonsils just as well as the man who has done nothing but throat work for ten or fifteen years. I have done my share for twenty years, and I believe I can take them out better than I could two years ago, or one year ago. I believe it is the same with older men. They are learning every day something they did not do previously. I believe in this idea of radical removal of the tonsils when you have a case of suppurated tonsils, only when it is necessary. I am a good deal like Dr. Dayton. I believe in the presence of an infection it is best to do as little work as you can unless it is necessary, and then do it. But the idea of taking half a tonsil one day, and a week or two later taking the rest, seems to me foolishness. I believe it is. While doing it, do it all. The only excuse I could see is the opportunity of doing the second operation.

If it is necessary in a large, bulging abscess to make a good drainage, make it. What would a man do in general surgical work? What would you think of him if he would make a little bit of a pin hole drain in an abscess? It doesn't do the work. When opening a tonsillar abscess, drain it, even if you have to take out the whole tonsil to do it. Many times you have to, because the pressure of the large tonsil is sufficient to close up the drainage very quickly.

**Dr. H. B. Lemere, Omaha,** closed the discussions on his paper as follows:

I certainly enjoyed Dr. Bushman's paper, and I think he has covered the ground very fully. There are one or two points on which I would like to speak in the discussion of his paper. I think we should consider whether the tonsil has primary infection or if the infection is secondary. In most cases, if careful search is made there will be found an infected condition more peripherally situated than the tonsil. You may find decayed teeth, or a molar tooth with the gum growing over it and forming a little sac in which there is infected material most of the time. If search is made upwards the nose may be found at fault, with an infected condition of the ethmoid or nasal sinuses.

I think Dr. Fall's suggestion was right to the point. I refer to his statement that careful feeding in children is undoubtedly very important in eradicating these diseases of the upper respiratory tract. But it doesn't seem to me that care in feeding alone will be entirely successful in warding off these troubles. In spite of the most careful feeding, a child will get a common cold in this climate in which temperatures are varying. It is impossible to dress children so that they will be of a uniform exposure during the day and the pronounced changes in temperature produce colds. The child who catches cold once will probably catch innumerable colds, and this means infection of the upper and lower respiratory tracts, generally the upper. With this infection of the nose and pharynx there will be infection of the tonsils, and they will become enlarged, so I feel that in every case, children and adults, our tonsil work will not be successful unless the cause of the infection of the tonsils is looked for and treated. I have seen cases enucleated cleanly that did not get the results expected. The throats remained sore and the patients had practically all the trouble they had before. I find in a great many of these cases infected teeth or some peripheral source of infection, infection of the nasal sinuses or ethmoid. So I think prophylaxis is a subject we need to discuss at the present time. We want to find out how to treat the patient before a tonsillectomy if this is necessary, and how to help him afterward.

There was one statement made that children should not be operated on until five years of age or older that should not go unchallenged in this meeting. If enlarged tonsils and adenoids are present at the age of three years, the child is not breathing through its mouth. At the end of five, or seven or eight years the child's head should normally have developed to a remarkable extent, and removing the tonsils at the age of eight years will not give that child 50% of the benefit it would receive had the obstructions been removed earlier, even at three years. The roof of the mouth will be arched; the nasal cavities smaller, and the post nasal space so contracted that probably there will never develop enough breathing space. The nose will be improperly ventilated, a chronic state of catarrh will remain with that child the rest of its life. I think the statement we should wait until seven or eight years is a most pernicious statement, and if weight is given to it, a great deal of harm will be done.

I will answer a few of the criticisms in regard to my procedure. I sometimes read literature outside of the medical, and I am very fond of reading to the children Bunyan's "Pilgrims Progress." It seems to me I can compare Dr. Dayton and Dr. Owen to a very estimable character in that book called Christian. In his travels Christian came to a path that looked exceedingly dangerous. He was afraid of some lions he saw ahead and wanted to turn back very badly; did not want to advance, but he finally got his courage up and advanced, and when he reached the lions he found they were chained. So I think with these theoretical dangers, if the doctors will have a little courage, they will find the lions are chained. To encourage them I would call attention to the fact that Dr. Owen stated a nice dissection could not be done when the tonsil and the surrounding structures are swollen. The dissection may not look beautiful with the peritonsillar tissues swollen from the quinsy, but when these swollen tissues have subsided, the pillars are found to be free and the throat assumes as good an appearance as though there had been no quinsy, though for the first week or two the swelling may make you think possibly you have not gotten all the tonsillar tissue. In spite of the criticism that it would be impossible to do a nice dissection it is urged in the discussion that the pillars be very carefully separated from the tonsil. If the pillars can be carefully separated the completion of the operation is simple.

As to aspiration of the pus my critics are not consistent. Recommendation is made that the patient be put under ether and the abscess opened. With a good suction apparatus and a good light, there will be absolutely no danger of aspiration of pus into the larynx or lungs. It is just as easy to aspirate the pus when operating for tonsillectomy as when draining the abscess under ether. It isn't always such an easy thing to find a pus cavity as you would be led to believe. Some of our best throat surgeons will admit that sometimes the abscess in cases of quinsy is very hard to reach. In some cases it is cruelty to the patient to try with a local anesthetic to search for the pus. It is either to leave the patient to fight it out until the abscess points or give an anesthetic and find it. It is where an anesthetic has to be given that this operation patricularly appeals to me, because when the patient is under the anesthetic the operation can be carried to completion with perfect success, and all possible recurrence of quinsy is remedied, and this is surely something accomplished. Very often there will be two or three attacks of quinsy during the year. If you can prevent that, why not do it? For that reason I brought this paper before this meeting.

I thought the idea was original. I find on seeing the literature that it is not original; that Dr. Barnes of Harvard University had done the operation and reports cases before me. But I do find there is some opposition on the part of the profession that might subject a surgeon to unjust criticism for this procedure. In an operation like this with nothing but theoretical grounds against it you will not find a man objecting who has ever done it, because the results are so satisfactory—I would suggest that you be not afraid of the lions; but be quite sure they are chained.

---

## Pyelography, Indications and Technic.

Clarence Emerson, Ph. D., M. D., Lincoln, Neb.

Pyelography is the term applied to the task of taking radiographic pictures of the pelvis of the kidney for diagnostic purposes.

Since the renal pelvis and the ureters cast no shadow with the X-ray unless filled with a radio-resisting substance the performance of this work necessitates preliminary ureteral catheterization and injection of such resisting substance into the pelvis. It therefore requires a combination of cystoscopic and radiographic skill in the individual worker or a combination of two workers, a cystoscopist and a radiographer.

The desire to obtain more detailed information concerning the kidney pelvis and the ureter led cystoscopists to search for a radiographic medium that would be fluid in nature and therefore capable of injection into the pelvis. The metal first tried for this purpose was naturally silver because several of its salts were readily soluble and resistant to the ray. The relative inocousness of various silver salts and the strength suitable for this purpose was the subject of innumerable papers in surgical literature a few years ago. There appeared however at the same time many reports of harmful and even fatal results from its use and a recognition of its imperfection was universal.

The extreme value of pyelography is not a little attested to by the manner in which the dangers of silver injections were braved rather than to sacrifice the benefits of it at this time. The silver salts were all toxic although the toxicity of some was relatively slight. Severe inflammatory reactions were at time unavoidable and extensive necrosis of kidney tissue with death of the patient is recorded in several instances.

In the Journal of the American Medical Association, June, 1915, Burns presents a preliminary report on the use of thorium as a "New Agent for Pyelography". Later experience with this material has proved it to be an ideal pyelographic medium. Its nontoxicity has been proved by the absence of deliterious influence in actual practice and experimentally by injections intraperitoneally, intravenously and into the tissues of animals in doses many hundred times that which comes into consideration in pyelographic work. The solution is clear and watery and of such degree of fluidity that it readily flows out of the ureter and pelvis when the examination is finished. It has also the advantage of being relatively inexpensive. The discovery of this agent for this purpose has placed pyelography on a safe basis where the experienced pyelographer can perform this work without fear of uncontrollable evil consequences.

Thorium, which is the next to the heaviest known element, is used in the form of the soluble citrate of thorium and sodium. The technic of preparing the solution while not complicated requires the observance of certain details formulated by Burns. Other salts of thorium have been investigated but the one mentioned has been most satisfactory. Quantities varying from 5cc to 150cc of the 15% solution have been injected into the renal pelvis and as much as 1 liter of the 10% in the bladder without harm to the patient.

The indications for pyelography briefly include nearly all surgical diseases of the kidney. The pyelographic picture will show the shape of the pelvis, its size, position with relation to the normal renal fossa and to the ureter. Torsion and contraction of the ureter or encroachment upon its wall are visible on the plate.

In any ureteral obstruction the kidney is apt to dilate. Therefore in stone, stricture, torsion and kinks of the ureter a dilated pelvis is demonstrable by pyelography.

A stone may be visible by means of pyelography when it is not seen by the ordinary plate. The uric acid stone casts almost no shadow by the X-ray, but it presents along the ureter or in the pelvis the displacement of thorium by it produces a sharp demarkation of its own outline. The variation in permeability of other varieties of stone and the thorium may also permit diagnosis. One of its greatest benefits with reference to stone is the ability to differentiate calcified lymph glands and enteroliths. A supposed kidney or ureteral stone may be found to lie entirely without the pelvis and ureter when the latter are injected with thorium.

A prolapsed or movable kidney will usually show a decided curve in the line of the ureter and pelvis and if obstruction is present the hydro-nephrosis is evident.

A tuberculosis of the kidney may show an encroachment on the pelvis which produces an irregularity in the normal contour as does also neoplastic growth. It, of course, is not presumed that great weight is attached to this as a matter of diagnosing the disease, but rather as confirmatory evidence.

In the determination of kidney, pelvic, and ureteral anomalies pyelography is of great advantage. Double ureter and horse-shoe kidney particularly are usually demonstrable in this way.

Certain well defined contra-indications to the use of pyelography should be observed. The guiding principle of instrumental urologic diagnosis has been aptly stated by Braasch in this manner: "Make no manipulation in the urinary tract other than is necessary to complete a diagnosis." The contra-indications for cystoscopy are naturally applicable here since cystoscopy is an essential part of pyelography. When the patient is aged and infirm, emaciated and weak, when there is evident marked bilateral involvement and when it is apparent that no surgical procedure could be effected both cystoscopy and pyelography are inadvisable.

When it is apparent that the lesion is unilateral it is best to refrain from catheterizing the apparently healthy ureter for pyelography. However, it is justified where a doubt as to the functional efficiency of the kidney is present.

Simultaneous bilateral pyelography was never justifiable with silver solutions. Even with thorium because of the danger of mechanical injury by the injection bilateral pyelography is inadvisable. Unilateral pyelography with evident bilateral lesions is attended with greater danger than when lesions are unilateral.

The technic of pyelography begins after the introduction of the cystoscope and ureteral catheters. In practically every instance preliminary cystoscopic examination has been made and specimens of urine collected from each kidney. Kidney efficiency tests have usually been applied.

It is convenient and almost essential that the table for this work be immediately beneath the X-ray tube so that transportation of the patient to the X-ray room will not be necessary following the catheterization. The table usually recommended for cystoscopic work is not best suited for this. One that can be adjusted from the cystoscopic position to a flat top after the ureters are catheterized is better. The X-ray plate can then be slipped under the patient in its proper position, the tube swung into place and the transformer put into motion—in fact, all preparation made for an exposure before the radiographic medium is injected. The cystoscope may be retained in the bladder or if desired removed simultaneously threading the ureteral catheters. This latter accident is not so apt to happen if the cystoscope is retained and securely held by a special holder attached to the table or by an assistant. The determination of the amount of the solution that should be injected in each individual case is possible in two ways. The injection may be made with the cystoscope still in place and while the examiner is observing the ureteral orifice. When thorium escapes about the catheter, the pelvis and ureter are full. The second method is to take the detection by the patient of discomfort in the side as an indicator of proper quantity. The first method I consider impractical because the patient must be maintained in the cystoscopic position that observation of the ureter may be effected and a change in position is necessary after the fluid is injected before the picture can be taken. This necessitates a prolongation of distress and permits escape of fluid. I prefer to adjust the position of the patient for radiographic purposes and then inject fluid. As soon as discomfort is noticed the exposure is made and then the fluid is permitted to escape. The injection is best made by the gravity method using a burette and rubber tubing that fits the ureteral catheter. Some difference of opinion exists as to the time for removal of the catheter. It has been advised to have it in situ 20 or 30 minutes to insure complete escape of the solution from the pelvis. I have usually found that the patient's distress ceases instantly with the withdrawal of the catheter and that a picture a few minutes later reveals an entire absence of thorium in the pelvis.

The interpretation of pyelographic pictures usually presents no difficulty. The position of the kidney pelvis with relation to the renal fossa is readily seen. The size is indicated on the picture and the evidence obtained by noting the quantity injected is available. The axis of the pelvis will be in the same plane as the ureter or approach a right angle to it, depending on whether the kidney is in its normal position or prolapsed. A shadow previously thought to be a kidney or ureteral stone may be readily seen to lie entirely without these structures. The shadow of a stone may be intensified by absorption of thorium or it may be evident through the difference in density between the stone and the thorium. The pelvis of the kidney may not show at all in the picture which would indicate, providing technique is perfect, that the ureter is closed at some point below the pelvis. I have one case in which this condition is found. The thorium flowed in as far as the obstruction and then escaped back into the bladder. Subsequent exposure of the kidney revealed a pyonephrosis with swollen and closed ureter. If the second ureteral orifice is not observed in cystoscopy, in case of double ureter, the radiographic fluid may escape through and fill the second ureter and make it evident on the plate.

### Case Reports.

Mrs. C. W. C. Date 9-1-17. Family history: Life story, patient had never had any serious illness until last summer although always considered herself "not very strong." About June 15 had a chill followed by intermittent fever, sweats, sallow complexion, asthenia and a prominent tender tumor presenting in the left Illiac fossa. Physician in charge reported pus in the urine. The acute attack mentioned continued several weeks with patient bedfast and attended by a nurse. Gradual improvement then began and continued to now. At this time the patient was apparently well and came to learn the cause of her last summer's illness because she feared a recurrence. The physician in charge had been unable to make a diagnosis. The tumor had disappeared and apparently all symptoms had entirely abated except for slight weakness.

All physical findings were negative except the following:

1. Undernourished and slightly anaemic.
2. Slight apical systolic murmur.
3. Both kidneys moveable and the right seemed tender.
4. No mass could be felt in the left Illiac fossa.
5. Pulse 84, temp. 98.6, resp., 19, Bl. Pr. 110-80.
6. Wassermann test negative.

Cystoscopy was performed; both ureters catheterized and pyelographic pictures taken.

Results:

Left kidney—No urine; aspiration secured pus.

Right kidney—Free flow of urine; Sp Gr 1020; clear; acid; albumin negative; sugar, negative; casts, negative; pus, negative.

Phenolsulphonephthalein kidney test showed the following:

Left kidney—0.

Right kidney—Returned in 10 minutes.

Patient admitted to hospital Sept. 15, 1917. Pulse 160 at beginning of operation. Respiration shallow, 130 at close.

Pre-operative diagnosis complete: Pyelonephrosis, left kidney; moveable, right kidney.

Nephrectomy was performed. Findings: Left kidney greatly distended with pus. Pelvis and calyses distended into a circular sac.

Left kidney was removed through Bergmann's Oblique incision. Tube drainage.

Technique: Bergmann's incision; pedicle ligated with No. 3 chronic catgut; rubber tube drainage.

Patient discharged Oct. 6, 1917. All drainage ceased. Uneventful convalescense from nephrectomy.

Patient had an uneventful post-operative history. The drainage was slight, tube withdrawn entirely on the sixth day. Slight discharge persisted until the 18th day. The temperature reached 100.5 on the second day and varied between that and normal until the tenth day when it remained normal. Pulse near 100 until after the tenth day. No complications. At the end of six weeks the urine was found to be negative; patient had gained fifteen pounds and felt well. Seen at intervals for several months and always enjoying good health.

Mrs. L. W. Date 10-12-17. Patient has had hard attacks of pelvic and back pain in the left side occurring paroxysmally and associated with chills, sweats and fever. Has been sick for eleven years. Began with stomach pain. Pain left side at same time. Left side was always the seat of most intense pain during these paroxysms. Condition getting worse and patient weak; often confined to bed. Color sallow. At times they double her up in a severe cramp and has chills and sweating spells. Physician reports blood and pus in urine. Diagnosed stone in bladder or kidney.

Came to me with following symptoms: Pain in bladder, kidneys and pelvis; pus in urine, also blood. Acute attacks of pain stinging and sharp in urethra. Hard cramp-like paroxysms near left kidney region and passes more blood after these spells.

Physical findings were negative except slight laceration of perineum; uterus low.

Cystoscopic findings: Left ureteral orifice red, inflamed and edematous. Right, normal. Efficiency test, 12 min. in both. Flow of urine free in both. Throium pictures showed distortion of left pelvis. Urin from both kidneys contained pus and bacteria.

Heart: Irregular; systolic murmur.

Diagnosis: Stone in left kidney pelvis.

Patient was admitted to hospital Dec. 22, 1917. Operated and found kidney enlarged, adherent to fatty capsule. Stone of large size found lying in pelvis. Incised pelvis on posterior side and extracted stone.

Technique: Lumbar exposure; oblique incision; tube and gauze drainage.

Post-operative history: Uneventful convalescence.

---

## Serial Extraction in Pyorrhea.

W. Clyde Davis, M. D., D. D. S., Lincoln, Nebraska.

For some months I have been using serial extraction, in mouths where pyorrhea was general, in the treatment of systemic lesions. The result has been very marked.

I think they are more than equal to the injection of a special prepared autogenous vaccine. To go over the entire subject it would be necessary to write a fairly good sized treatise on micro-organisms of the mouth.

I therefore ask my readers to refresh their memories on forms of bacteria usually found in these oral infections. Also study the theories of the conditions of altered re-activity on the part of the body which comes about as a result of infection and designated by the term Allergy. Review the theories of immunity; also the development, source and disposition of anti-bodies.

Again go over the process of the development of anaphylaxis. Make a short review of vaccines and their uses. Also the methods of producing autogenous vaccines and their particular use in combatting the general lesions which the parent bacteria have produced.

We are now ready to intelligently undertake the treatment I will here outline. With each individual case a record similar to the one which just follows should be kept.

Name.................................................. Age..............
Residence ..................................................................
Date of First Consultation..............................................
Systemic Disorder.......................................................
Blood Pressure.......Temperature.......Pulse Rate.......
Radiograms ...............................................................
Advice .......................................................................

Clinical History

Date.................................. Operation ..................................
Blood Pressure......Temperature......Pulse Rate......
Remarks ..................................................................
Date.................................. Operation..................................
Blood Pressure......Temperature......Pulse Rate......
Remarks ..................................................................
Date.................................. Operation..................................
Blood Pressure......Temperature......Pules Rate......
Remarks ..................................................................

For convenience we will take a case where most of the teeth are in the mouth, the teeth are loose from pyorhea or those which are not loose have been filled and the X-ray shows abscessed conditions in the apical region. General extraction is decided on in this case.

The first sitting we extract one, two or three of the teeth. Six or seven hours thereafter there will probably be a febril reaction showing a rise of temperature from one to three degrees. This generally subsides within a few hours.

From your previous review in bacteriology you will see the reason why the next sitting should be from eight to twelve days after the first. I generally make an appointment for the eighth day. If the general trouble from which the patient is suffering is worse at this time I postpone the operation for two or three days.

I continue the extractions in these periods of about eight days to completion of the case.

Each time I open the tissues in extracting, I infect my patient, which has the same result as the injection of an autogenous vaccine. During the process of extraction I try to avoid and not operate on the twenty-first day from the first operation. You will get the reason in the study of theories pertaining to anaphylaxis.

By the method the surgical work acts as a treatment with benefit to the general lesion present. In case there is a general weakness due to oral infection, but the same has not manifested itself we are giving such patients just the treatment they should have, looking to the checking of further development of their latent organic trouble.

I have many dozens of cases both private and in my clinic wherein cures have been prompt and marked.

I will cite just one case and leave the method with the profession for a trial.

Mr. H., sixty-six years old, blood pressure 210, temperature two degrees above normal, a flow of puss from around every one of the twenty-six teeth, most of them loose.

First sitting in April, extracted three teeth. His daughter is a nurse and reported two additional degrees of temperature six and one-half hours after operation. Eight days later blood pressure 200, two degrees temperature; extracted four teeth. Seven hours later the reaction only showing one additional degree of temperature. Eight days later extracted six teeth, blood pressure 175, no temperature, no reaction. Eight days later blood pressure 160 no temperature, extracted remainder of teeth, slight reaction that night.

His blood pressure has been taken once a week now for four months and the temperature is generally normal and I have not found this blood pressure above 160 on any occasion.

I have secured similar results in rheumatism, neuritis, and many organic troubles.

I assure my brother physicians and dentists that the method is worth a trial.

In the treatment of pyorrhea a similar general effect is produced if two or three teeth are curretted at each sitting with about eight days between sittings. At each visit thoroughly currette the alveolar borders, opening the blood stream to a small amount of additional infection to act as a vaccine.

---

There is really danger in the sugar habit. It is possible that the recent increase in the quantity of sugar consumed per capita in the United States has increased our number of diabetics. Between 1800 and 1810 the average consumption of sugar by each individual in the United States was 11 pound a year, but between 1910 and 1917 it was 73 pounds, and Mr. Hoover is credited in the daily papers for September, 1917, with showing this figure for 1916 to be 90 pounds. Intelligent treatment of the diabetic requires that he must recognize the three varieties of food—carbohydrates, protein and fat—and he must have a great knowledge of the nutritive (caloric) values of these foods. Upon his acquaintance with the composition and qualities of the foods he eats depends his ability to combat his disease.—(Elliott P. Joslyn, M. D.)

THE NEBRASKA STATE
MEDICAL JOURNAL
Published monthly by The Nebraska State Medical Association.

J. M. Aikin, Managing Editor..........Omaha

Committee on Journal and Publication.

F. A. Long, Chairman..........Madison
W. O. Bridges..........Omaha
B. F. Bailey..........Lincoln
J. M. Aikin, Ex officio..........Omaha

Subscription $2.00 Per Year. Single Copies 20c Each

All communications should be addressed to
The Nebraska State Medical Journal,
476 Brandeis Bldg., Omaha, Neb.

Entered at the Post Office at Norfolk, Nebraska, as second class matter.

Vol. III. December, 1918. No. 12

## Influenza In Omaha.

The prevailing pandemic of influenza first appeared in Omaha in the first few days of October. On the 4th information was received from Fort Omaha that a large number of cases had appeared there within the preceding twelve hours. In view of the fact that there had been large crowds in Omaha attending the Ak-Sar-Ben festivities, it was assumed that in all probability there had been a general exposure.

Conforming to the advice given by the Surgeon General of the Public Health Service, all public gatherings, including theaters, schools and churches were then closed. Individual case-quarantine was not established, for the reason that the life of the organism concerned outside of the body is very short, and information received from the Surgeon General's office made it seem probable that there was very little danger of carrying the disease. In other words, transmission occurs almost entirely by direct contact, that is, through the excretions from the mouth and nose of infected individuals. Parenthetically it may be stated that this conclusion has been apparently justified by the later course of the epidemic.

On October 5th there was reported to this office 144 cases of influenza and the number reported increased regularly until on October 9th there were 537 cases, which figure constituted the highest of our disease incidence. The morbidity curve then dropped rapidly, until on October 12th there were 229 cases. The daily reports then remained about the same until October 22nd they dropped to 138. Since that time there has been a gradual fall in the number of cases with the exception of a few days following the crowds incident to the "Peace Celebration" when they again rose to a few over one hundred. Altogether there have been approximately 7500 cases reported to date (November 20th).

Numerous instances could be given which further justify the conclusion that it is a so-called contact disease. For instance, one or two cases occurring in a business office seemed to furnish a nidus of infection for the surrounding workers. Again there have been a few offices in which the disease has not appeared. The fluctuations in our morbidity curve are easily explainable by crowds occurring some two or three days previous to the crest. There have been few contagious diseases where the morbidity rate of doctors and nurses has been so high.

Gas masks were advised to be worn by all persons coming in contact with the disease and also when necessity required attendance in crowds. No prophylactic medication was advised with the exception of some mild oily drops applied to the nasal mucous membrane, acting simply as a mechanical lubricant.

The mortality curve shows the peak to have occurred about one week subsequent to the peak in the morbidity curve. This, of course, is to be explained by the occurrence of pneumonia, which, in the rate of about twelve to one, furnished the primary cause of death.

The virulence of the epidemic in the past three weeks has definitely become less. This is shown by our lower mortality curve. We are able to predict that the epidemic will die out by lysis rather than by crisis.

Apparently the chief value of the restriction imposed on crowds depends on the lower transmission of the disease, and consequent attenuation of the organism concerned. On the original exposure, the rate of transfer being high, the virulence was rapidly increased—stepped up, as it were—and the most susceptible people, that is those among whom there was least resistence, immediately acquired the disease. Later on by slow transfer, attenuation occurred and the disease was much less virulent.

Realizing the desirability of some scientific investigation being instituted if possible, the faculties of Creighton Medical College and the Medical Department of the University of Nebraska were induced to jointly form a commission under the direction of the Health Department for the investigation of this disease. Some interesting information has been secured which will soon be ready for reporting. Several strains of an organism resembling an atypical pneumococcus were isolated from different patients and a vaccine prepared. This vaccine is now being distributed to physicians in our neighborhood who will keep records of results obtained and mail them to this Department.

The educational value of this epidemic will almost certainly be great. It is regrettable but none the less certain fact that it takes some tremendous jar to bring the public to a realizing sense of the importance of individual sanitary methods. It seems that we, as physicians, should make every effort to clinch the impression made on the public at this time. The conclusion seems forced on us that progress in public health can only be made as fast as the mass of people are ready to receive it, and that the change must originate with the individual.

Dr. E. T. Manning,
Health Comr., Omaha.

---

The advance report from the Omaha Board of Health on the flu epidemic printed in this issue of the Journal, portends a detailed presentation of clinical and laboratory findings in a subsequent issue, in the near future. The Journal office has received many well written "news items" for our reading pages, commending certain vaccines or medicines for their special properties in preventing or curing an attack of the flue. In the absence of authentic evidence supporting such claims, the Journal has omitted printing them. Indeed, words of warning from our Federal Department of Public Health, our State Commissioner of Health, and our Health Commissioner for Omaha, supported by discerning physicians of large bedside experience have justified a warning to the profession against supplanting remedies proven by rational clinical experience as good, for something new but not yet demonstrated as better.

---

We know better how dense the darkness is when we have come into the light. By the same token our ignorance becomes obvious when we mingle with educated people. In the daily routine of practice we patronizingly condone ourselves as martyrs to our profession, unconsciously depriving ourselves of a knowledge concerning better ways, until after much persuasion we have attended as good listeners, or earnest participants, in our county society and state association meetings.

---

The public health will be greatly improved after this world war, because the doctors who served in the army will put into use the improved sanitation with which they have become familiar. They can be leaders of public sentiment for the observance of good health laws, and the enforcement of proper quarantine regulations, in the event of any contagious disease.

---

The home coming of our physicians is anticipated with joy and gratitude. A jolification meeting for fraternal felicitations with social features of unusual prominence given during our 1919 annual convention would be a fitting digression for the new conditions in which we live. Such an assembly might well include many of our loyal non-medical friends who will joyously welcome the return of their family physician. The war has greatly increased our knowledge and united our working force for preventing and combating disease. Our President has expressed his wish that the local committee in charge of preparations for our annual convention, plan for giving audience to his address on Tuesday evening, at a general session.

---

### Councilor and Trustee Meeting.

Our Board of Councilors whose terms of office under our revised By-Laws begin and end with the calendar year, will meet in January for organization and planning their work for the ensuing year. The revised By-Law Chapter 7, Sec. 4 constitute our Councilors the Trustees of our Association, charging them with the property and financial affairs of the Association, also that they audit the books covering all the financial transactions of the Association. The one meeting may well serve for their double duty, and the Journal office the place of meeting. Dr. A. P. Overgaard, Secretary of the Council, will notify the members of the exact date of that meeting.

## Our 1919 Meeting.

Members who desire a place on our Scientific Program should at an early date send the title of their paper, with an abstract of it, to the Chairman of our Committee, or to the Chairman of the section in which their paper properly belongs.

Our Constitution and By-Laws say:

> "The Committee on Scientific Work shall consist of the Secretary, who shall be Chairman, and the Chairman and Secretary of the Sections, who shall determine the character and scope of the scientific proceedings of the Association of each session subject to the instructions of the House of Delegates or of the Association, or to the provisions of the Constitution and By-Laws. Fifteen days previous to each annual session it shall prepare and issue a program."

The duties of this Committee cannot be accomplished in a thirty day period immediately prior to the fifteen days previous to the annual session for which programs are issued. Duplicate titles will be grouped as a symposium.

Younger members who offer adequate clinical experience or original work, to support their theme, are especially urged to be heard by the men who attend our Association meeting for its educational advantages.

---

While examining several hundred young men and boys for overseas service in the Red Cross we were surprised to find a large number with albumin in the urine. Further investigation brought out the fact that nearly all these cases of albuminuria were in those who had been sick with the Spanish influenza. Over 20% of those giving a history of the "flu" were carrying albumin in the urine although many had only a light attack, not being sick enough to be put to bed, but having the coryza, headaches, etc.

The very large percentage of cases, even mild cases, in which the disease has attacked the kidneys shows up the "flu" in a new and sinister light. Every person having the slightest symptoms of the disease should have the urine examined a few weeks afterward, for taken early and handled properly most of these acute and sub-acute nephritic conditions can be handled successfully but allowed to progress for some time, "Bright's" and inevitable death are the result. Within the next two years we will undoubtedly see a great increase in nephritic disease as a result of these "hangovers" from the "flu."

D. T. Q.

## Ravages of the Influenza Epidemic.

### Deaths in America Greatly Outnumber War's Casualties Among American Troops.

Washington, D. C., Nov. 16, 1918.—The influenza epidemic has thus far taken a much heavier toll of American life than has the great war. The total loss of life throughout the country is not known, but the Bureau of the Census has been publishing, for forty-six large cities having a combined population estimated at 23,000,000, weekly reports showing the mortality from influenza and pneumonia. These reports, which cover the period from September 8 to November 8, inclusive, shows a total of 82,306 deaths from these causes. It is estimated that during a similar period of time the normal number of deaths due to influenza and pneumonia in the same cities would be about 4,000, leaving approximately 78,000 as the number properly chargeable to the epidemic.

The total casualties in the American Expeditionary Forces have recently been unofficially estimated at 100,000. On the basis of the number thus far reported, it may be assumed that the deaths from all causes, including disease and accidents, are probably less than 45 per cent and may not be more than 40 per cent of the total casualties. On this assumption, the loss of life in the American Expeditionary Forces to date is about 40,000 or 45,000.

Thus, in forty-six American cities having a combined population of only a little more than one-fifth the total for the country, the mortality resulting from the influenza epidemic during the nine weeks' period ended November 9 was nearly double that in the American Expeditionary Forces from the time the first contingent landed in France until the cessation of hostilities.

For the forty-six cities taken as a group, the epidemic reached its height during the two weeks ended October 26, for which period 40,782 deaths were reported—19,938 for the week ended October 19 and 20,844 for the following week. Since October 26, however, the decline has been pronounced. During the week ended November 2, 14,857 deaths occurred, and during the following week only 7,798. The only city in which the number of deaths reported for the week ended November 9 exceeded the number occurring during the previous week was Spokane, Washington.

In general, the epidemic traversed the country from east to west. In a number of eastern cities—notably Boston, where the greatest mortality occurred during the week ended October 5—the largest number of deaths were reported for earlier periods than that which covered the height of the epidemic for the 46 cities taken as a group. On the other hand, in New Haven, New York, Pittsburg, and Rochester the maximum mortality occurred somewhat later than in eastern cities generally. In Baltimore, Buffalo and Philadelphia the two weeks' period ended October 26 showed the greatest number of deaths. For the entire nine weeks' period, the greatest mortality due to the epidemic, in proportion to population—7.4 per one thousand—occurred in Philadelphia; and the next greatest—6.7 per 1,000—was reported for Baltimore.

### Most Powerful Foe Of Humanity.

I am more powerful than the combined armies of the world.

I have destroyed more men than all the wars of the world.

I am more deadly than bullets, and I have wrecked more homes than the mightiest of siege guns.

I steal, in the United States alone, $3,000,000,000 each year.

I spare no one and I find my victims among rich and poor alike; the young and the old; the strong and the weak; widows and orphans know me.

I loom up to such proportions that I cast my shadow over every field of labor from the turning of the grindstone to the moving of every railroad train.

I massacre thousands upon thousands of wage earners in a year.

I lurk in unseen places and do most of my work silently. You are warned against me, but you heed not.

I am relentless, I am everywhere; in the home, on the street, in the factory, at railroad crossings and on the sea.

I bring sickness, degradation and death, and yet few seek to avoid me.

I destroy, crush or maim; I give nothing but take all.

I am your worst enemy.

I am CARELESSNESS.—(Medical Insurance and Health Conservation.

If my 1919 dues are not paid they should be paid NOW.

Occasionally some well meaning, but misinformed person, states that the United States Army has an adequate supply of nurses. At the end of September, 1918, there were some 7,000 nurses in France. It is estimated that 15,000 nurses are needed for each million men, so 15,000 nurses are doing the work of 26,000, and by working from eighteen to twenty hours a day, with but from five to ten minutes for meals, they are unable to give the sick the proper amount of care. In the United States we have, in cantonment camps, thirty-two great base hospitals and each hospital requires about 100 nurses. According to the Saturday Evening Post, October 26, the American Army in Italy is cabling for nurses and the French Commission of the Red Cross wires that four thousand more are needed at once. The French commission of the Red Cross wires also that about 500 nurses are needed to each division. That is about double the previous estimate of 15,000 for each million men.

The Surgeon-General has asked for a total of 25,000 nurses in France by January 1st, and that twice that many be available by July 1st of next year. This sounds impossible, but a great many things that seemed impossible have been done. No one should employ a hospital trained nurse for any work that they, or someone else can do. Young women can become very helpful in present government work, and add greatly to their efficiency as wives and homebuilders by taking hospital training. By doing this they will liberate trained nurses for war service, and there is a probability that partly trained nurses will be sent to France or given service in base hospitals here. In either case they will be helping their country just as much as if they were in khaki uniform. There is no education that fits young women for their life duties in caring for sick people comparable to hospital training.

M. P. W.

### STATE NEWS.

The corner stone of the New Lutheran Hospital, Falls City, was laid recently. The building is to cost between $80,000 and $90,000.

The epidemic of flu in Holt county has been so severe that the neighbors were not allowed to nurse one another and the Red Cross took charge of the sick people.

Dr. Irvin C. Munger, Lincoln, has been appointed physician to the State Penitentiary, to succeed Dr. George E. Williams, Havelock, who has entered the military service.

This association has for its object the care of children whose parents are employed and thus being unable to be cared for at home. One or more places will be established throughout Omaha for these day nurseries.

Omaha Day Nursery Association of Omaha has been formed. The officers consist of Floyd Clarke, president; J. H. Beveridge, vice president; T. H. Weirich, secretary; D. E. Cleveland, treasurer. The Board of Trustees consists of Floyd S. Clarke, J. H. Beveridge, Margaret Hynes, Gould Dietz, Leo A. Hoffman, Arnold Browar, Thos. H. Weirich, Raymond M. Crossman, F. A. McCormick, D. E. Cleveland, J. E. Fitzgerald and W. E. Reed.

A letter from Captain Ira H. Lockwood, dated at about the time the armistice was signed says he expects to eat Christmas dinner in Bordeaux with his brother-in-law, who lives at that place. Captain Lockwood was former assisting physician and surgeon at Dr. Bailey's Sanitorium. Shortly after war was declared he offered his service and was commissioned first lieutenant, and was later promoted to captain. He has been in France about a year.

### DEATHS.

Lieut. Joseph Harold Boyes, M. C., U. S. Army, Hebron, Neb.; Ensworth Medical College, St. Joseph, Mo., 1893; aged 49; founder and owner of the Blue Valley Hospital, Hebron; died at his home, Oct. 24, from pneumonia following influenza.

Lorenzo R. Thornton, Filley, Neb., (License, Nebraska, 1891); aged 84; a veteran of the Civil war; died in the Soldiers' Home, Milford, Oct. 17.

Dr. Joseph F. Borghoff, Warmsprings, Mont., Creighton Medical College, age 32, died of pneumonia Nov. 17.

## A Neglected Sanitary Problem.

To every form of life the wastes of that life are a source of danger. Human life is no exception, and the proper disposal of human excretion is a sanitary essential.

While modern in so many respects, our railway train is far from it in the final disposal of its sewage. Health authorities generally recognize the faulty condition, but no state has attacked the problem, chiefly, no doubt, because its authority covers so limited an area.

Dumping sewage upon the roadway should not be allowed. It may readily pollute a near stream. Flies may readily swarm upon it; and an hour later enter a home carrying enteric disease. In warm or dry weather flies are borne long distances to towns or habitations where organic waste always accumulates. A typhoid carrier upon the train can hardly conceive of the devastation possible should conditions be fit.

Various successful methods are installed to treat sewage for the home or town. The simple L. R. S. privy meets the needs for the whole year in the south. Some such device which either biologically or chemically will disinfect, is most certainly demanded. Sanitarians should give heed to this need. Now that the railroad systems are nationalized, authority to meet the need is also centralized.

Water flushing as now in use of course is too cumbersome. It would require too bulky apparatus to be in use between terminal stations, and to be easily disposed of at those stations. There may be suitable apparatus on the market already; if so the writer is not familiar with it. Here indeed is a field worthy the careful study of the inventor.

The Committee on Pollution and Sewage of the Merchants' Association of New York, in a circular dated Sept. 30, 1918, have called this matter to the attention of Director Gen. McAdoo through their chairman, Edward Hatch, junior.

S. R. T.

## Orders to Officers from Nebraska of the Medical Corps, U. S. Army.

### November 2.

To Camp Crane, Pa., from Camp Jackson, Major S. R. Hopkins, Hastings; base hospital, from Fort Riley, Capt. C. K. Gibbons, Kearney.

To Camp Greene, N. C., base hospital, from Fort Oglethorpe, Capt. L. C. Bleick, Omaha.

To Camp MacArthur, Texas, base hospital, from Fort Oglethorpe, Capt. W. P. Haney, Omaha.

To Camp Pike, Ark., base hospital, from Fort Oglethorpe, Capt. R. P. Stoops, Scottsbluff.

To Camp Sevier, S. C., base hospital, from Fort Oglethorpe, Capt. I. W. Haughey, Aurora.

To Camp Wadsworth, S. C., base hospital, from Fort Oglethorpe, Lieut. A. J. Boren, Hastings.

To Camp Zachary Taylor, Ky., field hospital, from Fort Riley, Lieut. F. N. Townley, Kenesaw.

To Dallas, Texas, Love Field, from Fort Omaha, Capt. R. Crook, Winnetoon.

To Fort Riley for instruction, Lieut. A. A. Smith, Hastings.

### November 9.

To Camp Crane, Pa., Evacuation Ambulance Company, from Fort Riley, Capts. B. M. Deardorf, Clatonia; E. I. Whitehead, Holdrege.

To Hoboken, N. J., from New Haven, Lieut. C. M. Hyland, Omaha.

To Mineola, N. Y., Hazelhurst Field, for instruction, from Vancouver Barracks, Capt. O. A. Brittell, Belgrade.

November 16.

To Camp Shelby, Miss., from Camp Jackson, Capt. F. P. Dorsey, Hartington.

To Rochester, Minn., Mayo Clinic, for instruction, and on completion to Camp Grant, Ill., base hospital, for instruction, from Fort Riley, Lieut. G. E. Peters, Bloomfield.

November 23.

To Camp MacArthur, Texas, as tuberculosis examiner, from Camp Sherman, Capt. L. S. Robinson, Kearney.

To Camp McClellan, Ala., from Fort Riley, Lieut. H. H. Thompson, Talmage.

To Fort Benjamin Harrison, from Central Department, Lieut. L. C. Hilsabeck, Gretna.

To San Antonio, Texas, Kelly Field, from Austin, Texas, Lieut. C. L. Housel, Ansley.

November 30.

To Camp Abraham Eustis, Va., from Camp Sheridan· Lieut. W. J. McCrann, Omaha.

To Camp Crane, Pa., base hospital, from Camp Travis, Lieut. J. D. McCarthy, Omaha.

To Camp Zachary Taylor, Ky., as orthopedic surgeon, from Fort Riley, Lieut. L. K. Strate, Hastings.

To Fort Oglethorpe, evacuation hospital, from Camp Beauregard, Capt. F. J. Wurtele, North Platte; from Camp Bowie, Capt. G. H. Rathburn, Fremont.

To Indianapolis, Ind., from Rantoul, Lieut. N. L. Criss, Omaha.

To Lake Charles, La., Gerstner Field, from Fort Oglethorpe, Lieut. F. W. Plehn, Scottsbluff.

To New Haven, Conn., Yale Army Laboratory School, from Fort Oglethorpe, Major H. E. Eggers, Omaha.

The following order has been revoked: To Fort Oglethorpe, evacuation hospital, from Camp Jackson, Capt. W. N. Anderson, Omaha.

## COMMISSIONS OFFERED AND ORDERED TO DUTY ON ACCEPTANCE.

November 2.

To Camp Dodge, Iowa, base hospital, for instruction, Capt. A. R. DesJardien, Lincoln.

To Fort Riley for instruction, Capt. E. E. Boyd, Central City; Lieuts. P. R. Schlumberger, Oakdale; G. Buol, Ravenna; W. E. Lamb, Sprague.

To New Haven, Conn., Yale Army Laboratory School, for instruction, Lieut. A. L. Barr, Omaha.

November 9.

To Camp Dodge, Iowa, base hospital, for instruction, Lieut. O. H. Hahn, Hastings.

To Fort Oglethorpe for instruction, Lieuts. L. L. Nelson, Norfolk; L. A. Dermody, Omaha; L. B. Lake, Wausa.

To Fort Riley, Capt. W. R. McGrew, Omaha; for instruction, Capts. E. C. Stevenson, Gothenburg; J. E. Simpson, Omaha; Lieuts. J. B. Redfield, North Platte; R. S. Johnston, Omaha; J. R. Leibee, Polk; J. W. Stockman, Red Cloud.

November 16.

To Camp Custer, Mich., base hospital, for instruction, Capt. D. C. Hilton, Lincoln.

To Camp Dodge, Iowa, base hospital, Capt. J. P. Williams, Lincoln.

To Camp MacArthur, Tex., to examine the command for nervous and mental diseases, Capt. B. F. Williams, Lincoln.

To Denver, Colo., Lieut. M. J. Powell, Fairbury.

To Fort Oglethorpe for instruction, Lieuts. C. H. Sheets, Cozad; G. B. Potter, Shelby.

To Fort Riley for instruction, Capts. R. H. Burrell, Creighton; P. H. Ellis, Omaha; E. A. Creighton, Red Cloud; Lieuts. A. Cauley, Humphrey; C. D. Eby, Leigh; N. H. Rasmussen, Scottsbluff; I. H. Levin, Venango.

November 23.

To Camp Dodge, Iowa, base hospital, Capt. L. B. VanCamp, Omaha.

To Fort Riley for instruction, Capts. J. B. Hoskins, Allen; G. H. Morris, Oshkosh; R. S. Mitchell, Red Cloud; G. A. Harris, Valley; F. B. Patterson, Dodge; J. M. Packer, Memphis; E. P. Murdock, Ogallala; D. W. Vanderhoof, Sutherland; R. H. Morse, Wisner.

To report to the commanding general, Central Department, Lieut. W. A. Staley, Holbrook.

## WAR COMMITTEES.

### National.

Hubert Work, Pueblo, Colo.
A. R. Mitchell, Lincoln, Neb.
M. L. Harris, Chicago, Ill.

### State.

Col. J. M. Banister, Omaha.
John E. Summers, Omaha.
Ewing Brown, Omaha.
Chas. L. Mullins, Broken Bow.
Jos. M. Aikin, Omaha.

### Councilor District.

First District—A. P. Overgaard, Chairman, Omaha; A. F. Tyler, J. H. Vance, W. P. Wherry; L. B. Bushman, F. H. Kuegle, B. W. Christie, R. A. Dodge.

Number of signers in the above district, 225.

Second District—H. J. Lehnhoff, Chairman, Lincoln; M. U. Thomas, A. P. Ginn.

Number of signers in the above district, 33.

Third District—A. W. Montgomery, Chairman, Stella; G. J. Rubleman, E. M. Tyler, W. T. Johnson, J. A. Waggener.

Number of signers in above district, 48.

Fourth District—A. E. Cook, Chairman, Randolph; M. H. Evans, C. L. Maxwell, H. S. Summers, F. A. Long, O. E. Underberg, W. T. Craft, G. E. Peters, R. C. Hawkins.

Number of signers in above district, 86.

Fifth District—R. C. Byers, Chairman, Nickerson; W. J. Davies, F. W. Johnson, M. L. Hildreth, E. R. Stewart, A. K. Knight, A. J. Lueschen, J. W. B. Smith.

Number of signers in above district, 8.

Sixth District—Frank Tornholm, Chairman, Wahoo; C. W. Doty.

Number of signers in above district, 27.

Seventh District—H. E. Potter, Chairman, Fairbury; Porter F. Dodson, J. W. Archerd, V. V. Smrha (J. Bixby, Alternate), J. W. Mitchell, A. J. Coats (G. A. Heath, Alternate), W. H. Squires.

Number of signers in above district, 108.

Eighth District—J. P. Gilligan, Chairman, O'Neill.

Number of signers in above district, 14.

Ninth District—G. I. Sellon, Chairman, Broken Bow; E. E. Barr, S. E. Overmass, C. T. Owings, J. F. McNulty, T. F. Britt, E. R. Keen, H. W. Hubbard, R. C. Talbott, A. E. Wanek, F. A. Nicholson, J. H. Fochtman, J. W. Miller.

Numbers of signers in above district, 77.

Tenth District—S. F. Sanders, Chairman, Holdrege; A. S. Ambrose, W. H. Powell, W. F. Dugan, L. W. Rork, W. M. Robertson, W. D. Macknechie, W. S. Fast, J. O. Hoffman.

Number of signers in above district, 102.

Twelfth District—A. J. Stewart, Chairman, Mitchell; C. A. Boyd, V. Andrews, W. H. Packard.

Number of signers in above district, 34.

Total number of signers, 762.

Number in M. R. C., 420.

Registered Physicians in Nebraska, 1565.

Members of our State Medical Association, 1139.

## NEBRASKA STATE BOARD OF HEALTH.

Dr. W. F. Wild, Commissioner of Health.
Dr. W. H. Wilson, Epidemiologist.
Dr. E. G. Zimmerer, Bacteriologist.
W. Grant, Sanitary Engineer.
Miss May Hyland, Chief of Bureau of Vital Statistics.

### Board of Medical Examiners.

### Board of Health.

Keith Neville, Governor.
Willis E. Reed, Attorney General.
W. H. Clemmons, Supt. of Public Instruction.

### Advisory Board.

Dr. J. E. Spatz, President, Fairfield.
Dr. C. L. Mullins, Vice-President, Broken Bow.
Dr. H. J. Lehnhoff, Secretary, Lincoln.
W. T. Johnson, Treasurer, Pawnee City.

### Recommended for Commissions in M. O. R. C.

(Supplementary List Sept. 26 to Oct. 31, Incl.)

Sollis Oscar Pitts, Alda....1st Lieut.
Earl Eugene Boyd, Central City....Capt.
Frank Joseph Kalal, Clarkson....Capt.
Richard Lynnaeus Ivins, Crawford....1st Lieut.
Ramon Haddock Burrell, Creighton....Capt.
George Henry Morris, Creston....Capt.
Riley Gilbert Rich, David City....Capt.
Fred Barton Patterson, Dodge....1st Lieut.
Milton J. Powell, Fairbury....1st Lieut.
Joel Clyde Hickman, Geneva....1st Lieut.
Earle Clement Stevenson, Gothenburg....Capt.
Oscar Herman Hahn, 320 E. High., Hastings.. 1st Lt.
Wilbert A. Staley, Holbrook....1st Lieut.
Clarence Eugene Kidder, Holstein....1st Lieut.
Anthony Cauley, Humphrey....1st Lieut.
Charles Daniel Eby, Leigh....1st Lieut.
Alphonse Regist Des Jardien, Lincoln....Capt.
Clarence Emerson, Orpheum bldg., Lincoln..1st Lieut.
Clarence Clyde Hickman, Lincoln....1st Lieut.
Oscar Earl Liston, Lincoln....1st Lieut.
David Clark Milton, Lincoln....Capt.
John Piper Williams, Lincoln....Capt.
Benjamin Franklin Williams, Lincoln....Capt.
John McKinley Packer, Memphis....1st Lieut.
Lloyd Leslie Nelson, Norfolk....1st Lieut.
Josiah Beckley Redfield, North Platte....1st Lieut.
Pierre Phyner Schlumberger, Oakdale....1st Lieut.
Arthur Laughlin Barr, 506 World Herald Building, Omaha....1st Lieut.
Irving Samuel Cutter, 420 Dewey St., Omaha....Capt.
Louis Arthur Dermody, 1120 South Twenty-ninth St., Omaha....1st Lieut.
Paul Harold Ellis, Twenty-fourth and Ames Ave., Omaha....Capt.
Tenney Tennyson Harris, 1021 First National Bank Building, Omaha....1st Lieut.
Raymond Shoot Johnston, 240 Bee Bldg., Omaha, ....1st Lieut.
Lilburn Baker Lake, 2003 Wirt St., Omaha..1st Lieut.
Bernard Aloysius McDermott, 1000 First National Bank Building, Omaha....1st Lieut.
William Raymond McGrew, 714 Keeline Building, Omaha....Capt.
Charles Harold Newell, 2310 North Twenty-second St., Omaha....Capt.
John Emerson Simpson, 1229 First National Bank Building, Omaha....Capt.
George Craggs Winterson, 606 National Bank Building, Omaha....1st Lieut.
John Ray Leibe, Pork....1st Lieut.
George Buol, Ravenna....1st Lieut.
Ernest Albert Creighton, Red Cloud....Capt.
Robert Sanford Mitchell, Red Cloud....Capt.
James William Stockman, Red Cloud....1st Lieut.
Francis Edgar Nail, Riverton....Capt.
Nelson Henry Hasmussen, Scottsbluff....1st Lieut.
George Benjamin Potter, Shelby....1st Lieut.
Glenn Washington Briggs, 4037 S Street, South Omaha....1st Lieut.
Willie Edgar Lamb, Sprague....1st Lieut.
Israel Herman Levin, Venango....1st Lieut.
Russell Harrison Morse, Wisner....1st Lieut.

### Nebraska Supplementary List Nov. 1 to 30, Inclusive

### Recommended for Commissions in M. O. R. C.

John Bennett Hoskins, Allen....Capt.
Lee Bradley Van Camp, Omaha....Capt.
Edgar Paul Murdock, Ogallala....1st Lieut.
Don Wilson Vanderhoff, Sutherland....1st Lieut.
George Arthur Harris, Valley....Capt.

41B [illegible]
167

3 2044 103 097 200